

工程力学（中外合作办学）专业本科生人才培养方案

执行学院：大连理工大学白俄罗斯国立大学联合学院

2024 年入学适用 四年制 本科生

Training Program of Engineering Mechanics

Joint Institute of Dalian University of Technology and Belarusian State University

Applicable Grade: 2024 Four-year Undergraduate Program

一、专业名称/ Major Name

工程力学（中外合作办学）专业

Engineering Mechanics

二、专业简介/ Major Overview

工程力学（中外合作办学）专业依托大连理工大学和白俄罗斯国立大学工程力学专业建立。大连理工大学工程力学（专业代码：080102）为国家“双万计划”一流专业建设点、国家级特色专业、辽宁省一流本科教育示范专业。拥有一般力学和力学基础、固体力学、流体力学、工程力学、计算力学、岩土与环境力学、动力学与控制、应用实验力学、生物与纳米力学、航空航天力学与工程、制造工艺力学、生物医学工程 12 个二级学科博士点和航空航天系统科学与工程交叉学科博士点。同时引进白俄罗斯国立大学在航空航天工程领域的优质资源。

The Engineering Mechanics program is established based on the Engineering Mechanics of Dalian University of Technology (DUT) and Belarusian State University (BSU). DUT's Engineering Mechanics (Program Code: 080102) is a leading program under the national "Double First-Class Initiative", a nationally recognized specialty, and a first-class undergraduate education demonstration program in Liaoning Province. It offers doctoral programs in 12 sub-disciplines, including General Mechanics and Fundamentals of Mechanics, Solid Mechanics, Fluid Mechanics, Engineering Mechanics, Computational Mechanics, Geotechnical and Environmental Mechanics, Dynamics and Control, Applied Experimental Mechanics, Bio- and Nano-mechanics, Aerospace Mechanics and Engineering, Manufacturing Process Mechanics, and Biomedical Engineering, as well as an interdisciplinary doctoral program in Aerospace System Science and Engineering. The program also incorporates high-quality resources from BSU's Aerospace Engineering field.

学院以学生为本，为每位本科生配备导师，通过因材施教、夯实基础、科教融合、强化实践教学，培养擅长外语交流，集力学理论、工程设计、计算机应用为一体的工

科研究型和应用型国际化人才。

The institute adopts a student-centered approach, assigning a mentor to each undergraduate student. Through personalized instruction, solidifying foundational knowledge, integrating science and education, and enhancing practical teaching, the program aims to cultivate research-oriented and application-oriented international talents proficient in foreign language communication and well-versed in mechanics theory, engineering design, and computer applications.

本专业基本学制四年,完成培养计划学分和毕业要求,分别授予大连理工大学(DUT)和白俄罗斯国立大学(BSU)两校工学学士学位。

After four years' study, students will be awarded Bachelor of Engineering Degree from both DUT and BSU while completing all credits and dissertation

三、专业培养目标/ Major Training Objectives

1. 培养定位/ Training Positioning:

本专业培养具有工程力学理论知识、现代计算技术和实验能力,能在力学及相关科学与工程领域中继续深造的高级科学技术人才或从事工程实践的高级工程技术人员。毕业生可从事上述交叉学科领域的研究工作,也可在航空航天、机械工程等领域担任技术开发和管理工作,能够成为社会主义事业德智体美劳全面发展的高水平建设者和可靠接班人。

The major aims to cultivate high-level scientific and technological talents with theoretical knowledge in engineering mechanics, modern computational skills, and experimental capabilities. These talents should be able to pursue further studies in mechanics and related scientific and engineering fields or engage in engineering practice as senior engineering professionals. Graduates can undertake research in interdisciplinary fields mentioned above, or engage in technology development and management in aerospace, mechanical engineering, and other areas, becoming well-rounded builders and reliable successors to the socialist cause with all-around development in moral, intellectual, physical, aesthetic, and labor education.

2. 培养目标/ Training Objectives:

(1)具有宽厚的人文社科、自然科学和工程力学专业基础和前沿技术领域的知识;

Possess a solid foundation in the humanities and social sciences, natural sciences, and the fundamentals of engineering mechanics, along with knowledge in cutting-edge technological fields.

(2)具有工程力学理论知识、现代计算技术和实验能力,能在力学及相关科学与工程领域中继续深造的高级科学技术人才或从事工程实践的高级工程技术人员;

Acquire theoretical knowledge in engineering mechanics, modern computational techniques, and experimental skills, enabling them to pursue further studies in mechanics and

related scientific and engineering fields or to engage in engineering practice as high-level engineering professionals.

(3) 具有健全的人格、良好的人文素养和高度的社会责任感，遵守工程职业道德规范，树立正确的工程伦理观；

Develop a sound personality, good humanistic qualities, and a strong sense of social responsibility, adhering to engineering professional ethics and establishing a correct understanding of engineering ethics.

(4) 具有优秀的团队精神、国际视野和国际竞争力，具有不断学习和适应发展的能力。

Cultivate excellent team spirit, international perspective, and global competitiveness, along with the ability to continuously learn and adapt to development.

四、专业毕业要求/ **Graduation Requirements**

1. 专业知识：掌握数学、物理等自然科学知识，发展较强的数学计算能力。系统掌握固体力学、工程力学、流体力学、计算力学、一般力学与力学基础以及实验力学等基础知识；

Professional Knowledge: Master natural science knowledge in mathematics, physics, and develop strong mathematical computational skills. Systematically grasp fundamental knowledge in solid mechanics, engineering mechanics, fluid mechanics, computational mechanics, general mechanics and mechanics fundamentals, as well as experimental mechanics.

2. 问题分析：能够应用工程力学与计算力学基础理论和现代运用技术，并通过文献研究，识别、表达、分析实际问题，以获得有效结论；

Problem Analysis: Be able to apply basic theories and modern application techniques of engineering mechanics and computational mechanics, and through literature research, identify, express, and analyze practical problems to obtain effective conclusions.

3. 设计/开发解决方案：较系统地掌握本专业领域力学基础理论、数值方法和实验技术等，能够应用工程力学专业知识，运用抽象思维能力，对基本力学问题进行深入分析并解决相关问题；

Design/Development of Solutions: Systematically grasp basic theories, numerical methods, and experimental techniques in the field of mechanics, apply engineering mechanics knowledge, and utilize abstract thinking abilities to conduct in-depth analysis and solve basic mechanics problems.

4. 研究：形成本专业的学习方法和思维方式，能够应用基础和专业知

识，通过设计实验、分析数据及信息综合等解决复杂工程力学问题，并得到合理有效的结论；

Research: Formulate learning methods and thinking modes in the field of this program, apply fundamental and professional knowledge, and through designing experiments,

analyzing data, and synthesizing information, solve complex engineering mechanics problems and draw reasonable and effective conclusions.

5. 使用现代工具：在解决实际力学相关问题过程中，能够开发、选择与使用恰当的技术、资源、实验和虚拟类设计与开发工具、信息技术工具，了解现代力学的进展和发展趋势，具有适应力学领域新技术发展的能力。掌握文献资料查询及运用现代信息技术跟踪并获取信息的方法；

Use of Modern Tools: In solving practical mechanics-related problems, be able to develop, select, and use appropriate technologies, resources, experimental and virtual design and development tools, and information technology tools. Understand the progress and development trends of modern mechanics and possess the ability to adapt to the development of new technologies in the mechanics field. Master the methods of literature search and use modern information technology to track and obtain information.

6. 工程与可持续发展：能够基于力学专业相关背景知识进行合理分析，评价实际力学相关问题解决方案对社会、健康、安全、法律及文化的影响，理解应承担的责任；

Engineering and Sustainable Development: Be able to conduct reasonable analysis based on relevant background knowledge in mechanics, evaluate the impact of solutions to practical mechanics-related problems on society, health, safety, law, and culture, and understand the responsibilities to be undertaken.

7. 伦理和职业规范：具有人文社会科学素养、社会责任感，能够理解和应用工程伦理，能够在专业科研和实践中理解并遵守学术规范和职业道德，履行责任；

Ethics and Professional Norms: Possess humanistic and social science qualities and a sense of social responsibility, understand and apply engineering ethics, and in professional research and practice, understand and adhere to academic norms and professional ethics, fulfilling responsibilities.

8. 个人和团队：能够在多学科背景下的团队中承担个体、团队成员以及负责人的角色。具有团队合作精神，人际交往能力和一定的组织管理能力；

Individual and Team: Be able to assume roles as individuals, team members, and leaders within multidisciplinary teams. Possess team spirit, interpersonal communication skills, and certain organizational management capabilities.

9. 语言能力：有较强的语言表达能力，具有熟练的英语口语、听力、写作和交流能力，胜任完全英语环境下的学习、生活及相关工作；初步掌握俄语，可开展相关专业的俄语学习与交流；

Language Proficiency: Have strong language expression skills, be proficient in English listening, speaking, writing, and communication, and be competent in studying, living, and working in a fully English-speaking environment. Have a basic grasp of Russian, enabling engagement in relevant professional Russian learning and communication.

10. 发展潜力：具备国际视野和跨文化交流、竞争与合作的能力。具有自主学习和终身学习的意识，有不断学习和适应发展的能力；

Development Potential: Possess an international perspective and the ability to engage in cross-cultural communication, competition, and cooperation. Have an awareness of self-directed learning and lifelong learning, with the ability to continuously learn and adapt to development.

11. 价值观：树立和践行社会主义核心价值观，能够阐释正确的价值观对工程和社会实践活动的影响。

Values: Establish and practice core socialist values, and be able to articulate the impact of correct values on engineering and social practice activities.

五、培养目标与毕业要求关系矩阵/ Matrix of Training Objectives and Graduation Requirements

培养目标 Training Objectives 毕业要求 Graduation Requirements	培养目标 1 Objective 1	培养目标 2 Objective 2	培养目标 3 Objective 3	培养目标 4 Objective 4
毕业要求 1 Requirement 1	●	●		
毕业要求 2 Requirement 2		●		●
毕业要求 3 Requirement 3	●	●		
毕业要求 4 Requirement 4	●	●		
毕业要求 5 Requirement 5		●		●
毕业要求 6 Requirement 6	●		●	
毕业要求 7 Requirement 7			●	●
毕业要求 8 Requirement 8		●	●	●
毕业要求 9 Requirement 9	●		●	●
毕业要求 10 Requirement 10		●	●	●
毕业要求 11 Requirement 11	●		●	●

六、毕业学分要求/ Credit Requirements

课程体系 Course System	课程类别 Course Category	学分要求 Credit Requirements		
		必修 Required	选修 Elective	合计 Total
思政课程 Ideological and Political Courses	思政类 Ideological and Political	16 (+2)	2	18 (+2)
通识课程 General Education Courses	通识类 General Education		6	6
基础课程 Foundation Courses	数学类 Mathematics	19.5		30.5
	自然科学类 Natural Sciences	8		
	智能与信息基础 Intelligence and Information Fundamentals	3		
专业课程 Professional Courses	专业基础课程 Basic Professional Courses	58		86
	专业类课程 Specialized Courses		6	
	专业实践课程 Professional Practice	10		
	毕业设计（论文） Graduation Design (Thesis)	12		
素质课程 Quality Courses	体育类 Physical Education	4		38
	外语类 Foreign Language	29	1	
	创新创业教育 Innovation and Entrepreneurship Education		4	
书院育人课程 College Education Courses	通识课程 General Education	8	2	不计入 总学分 Not counted
合计 Total		159.5	19	178.5

七、授予学位/ Degree

工学学士学位（大连理工大学）、工学学士学位（白俄罗斯国立大学）

Bachelor of Engineering Degree (Dalian University of Technology), Bachelor of Engineering Degree (Belarusian State University)

八、主干学科/ Main Disciplines

一级学科：力学

二级学科：工程力学

Primary Discipline: Mechanics

Secondary Discipline: Engineering Mechanics

九、专业核心课程/ **Core Courses**

理论力学、材料力学、结构力学、弹性力学、振动与波动力学、流体力学、塑性力学、有限元方法等

Theoretical Mechanics, Material Mechanics, Structural Mechanics, Elasticity Mechanics, Mechanics of Vibration and Waves, Fluid Mechanics, Plasticity, Finite Element Methods, etc.

十、专业课程体系及教学计划/ Professional Course System and Teaching Plan

课程体系 Course System	课程类别 Course Category	课程编号 Course Number	课程名称（中英文） Course Name (Chinese and English)	课程属性 Course Properties	课内学分 Credits	课内学时 Hours				课外 Extracurricular		建议修读学期 Semester												学分要求 Credit Requirements	
						授课 Lecture	实践环节 Practice Sections				学分 Credits	学时 Hours	一年级 First grade			二年级 Second grade			三年级 Third grade			四年级 Fourth grade			
							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2		
思政课程 Ideological and Political Courses	思政类 Ideological and Political	1000325210010	思想道德与法治 Ideological Morality and Rule of Law	必修 Required	2.5	40							●											必修 16（+2） 学分 Required 16（+2）	
		1000325210020	中国近现代史纲要 Survey of Modern Chinese History	必修 Required	2.5	40								●											
		1000325210030	马克思主义基本原理 Basic Theory of Marxism	必修 Required	3	48										●									
		1000325210040	毛泽东思想和中国特色社会主义理论体系概论 Introduction to Mao Zedong Thought and The Theoretical System of Socialism with Chinese Characteristics	必修 Required	3	48											●								
		1000325210050	习近平新时代中国特色社会主义思想概论 Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	必修 Required	3	48													●						
		1000325210060	形势与政策 ^[1] Current Affairs and Policy	必修 Required	2	32								●	●		●	●		●	●				
		1000325290010	思想政治理论课社会实践 Social Practice of Ideological and Political Theory Course	必修 Required	2	8				40										●	●				

课程体系 Course System	课程类别 Course Category	课程编号 Course Number	课程名称（中英文） Course Name (Chinese and English)	课程属性 Course Properties	课内学分 Credits	课内学时 Hours				课外 Extracurricular		建议修读学期 Semester												学分要求 Credit Requirements		
						授课 Lecture	实践环节 Practice Sections				学分 Credits	学时 Hours	一年级 First grade			二年级 Second grade			三年级 Third grade			四年级 Fourth grade				
							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2			
		1000325210070	社会主义发展史 the History of Socialist Development	选修 Elective	2	32																			选修 2 学分 Elective 2	
		1000325210080	中共党史 History of the Communist Party	选修 Elective	2	32																				
		1000325210090	中国改革开放史 History of China's Reform and Opening-up	选修 Elective	2	32																				
		1000325210100	中华人民共和国史 History of the People's Republic of China	选修 Elective	2	32																				
通识课程 General Education Courses	通识类 General Education	/	通识课程 General Education Courses	选修 Elective	6																				选修 6 学分 按通识课程清单 修读要求选修 Elective 6 By general education course list	
基础课程 Foundation Courses	数学类 Mathematics	1000311310040	线性代数与解析几何（中白） Linear Algebra and Analytic Geometry (DBJI)	必修 Required	3.5	56																			必修 19.5 学分 Required 19.5	
		1000311310030	数学分析 C1（中白） Mathematical Analysis C1 (DBJI)	必修 Required	5	80																				
		1000311310330	数学分析 C2（中白） Mathematical Analysis C2 (DBJI)	必修 Required	6	96																				
		1000362310010	微分方程 Differential Equations	必修 Required	3	48																				

课程体系 Course System	课程类别 Course Category	课程编号 Course Number	课程名称（中英文） Course Name (Chinese and English)	课程属性 Course Properties	课内学分 Credits	课内学时 Hours					课外 Extracurricular		建议修读学期 Semester												学分要求 Credit Requirements	
						授课 Lecture	实践环节 Practice Sections				学分 Credits	学时 Hours	一年级 First grade			二年级 Second grade			三年级 Third grade			四年级 Fourth grade				
							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2			
		1000311310400	概率论与数理统计（中白） Probability Theory and Mathematical Statistics (DBJI)	必修 Required	2	32																				
	自然科学类 Natural Sciences	1000362310020	大学物理 1 College Physics 1	必修 Required	3.5	56																				必修 8 学分 Required 8
1000362310030		大学物理 2 College Physics 2	必修 Required	3	48																					
1000312320010		大学物理实验 1 College Physics Experiment 1	必修 Required	0.5	4	12																				
1000312320020		大学物理实验 2 College Physics Experiment 2	必修 Required	1		24																				
	智能与信息基础 Intelligence and Information Fundamentals	1000517310050	计算思维与 Python 语言 B（中白） Computational Thinking and Python B (DBJI)	必修 Required	2	24			12																	必修 3 学分 Required 3
1000336310010		人工智能概论 Introduction to Artificial Intelligence	必修 Required	1	16																					
专业课程 Professional Courses	专业基础课程 Basic Professional Courses	1000305310010	工程图学（中白） Engineering Drawing (DUT-BSU)	必修 Required	2	32																				必修 58 学分 Required 58
		1000362410010	理论力学-静力学与运动学 Theoretical Mechanics- Statics and Kinematics	必修 Required	2	32																				
		1000362410020	现代力学进展导论 Introduction to the Development of Modern Mechanics	必修 Required	2	32																				
		1000362410030	理论力学-动力学	必修	3	48																				

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						授课 Lecture	实践环节 Practice Sections				学分 Credits	学时 Hours	一年级 First grade			二年级 Second grade			三年级 Third grade			四年级 Fourth grade				
							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2			
			Theoretical Mechanics-Dynamics	Required																						
		1000362410040	数值方法基础 Fundamental of Numerical Method	必修 Required	2	32											●									
		1000362410050	材料力学 Mechanics of Materials	必修 Required	4	64											●									
		1000362410060	分析力学 Analytical Mechanics	必修 Required	2	32												●								
		1000362410070	结构力学 Structural Mechanics	必修 Required	3	48												●								
		1000305410540	机械设计基础（中白） Mechanical Design Basis (DBJI)	必修 Required	3	48												●								
		1000362410080	数学物理方法 Methods of mathematics physics	必修 Required	4	64												●								
		1000362410090	计算机辅助机械设 计 Computer Aided Mechanical Design	必修 Required	2	16			24										●							
		1000326410340	振动与波动力学 Mechanics of Vibration	必修 Required	3	48														●						
		1000362410100	弹性力学 Elasticity	必修 Required	4	64														●						
		1000362410110	计算结构力学 Computational Structural Mechanics	必修 Required	2	32														●						
		1000326410320	流体力学 Fluid Mechanics	必修 Required	4	64														●						
		2490030051	连续介质力学（本硕 打通课） Continuum	必修 Required	3	48														●						

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							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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课程体系 Course System	课程类别 Course Category	课程编号 Course Number	课程名称（中英文） Course Name (Chinese and English)	课程属性 Course Properties	课内学分 Credits	课内学时 Hours				课外 Extracurricular		建议修读学期 Semester												学分要求 Credit Requirements		
						授课 Lecture	实践环节 Practice Sections				学分 Credits	学时 Hours	一年级 First grade			二年级 Second grade			三年级 Third grade			四年级 Fourth grade				
							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2			
专业实践课程 Professional Practice		1000305450190	机械设计基础工程实践（中白） Basic Engineering Practice of Mechanical Design (DBJI)	必修 Required	1		12		12										●						必修 10 学分 Required 10	
		1000362420010	基础力学实验 Elementary Mechanics Experiment	必修 Required	1		24											●								
		1000326420060	固体力学实验 1 Solid Mechanics Experiment 1	必修 Required	1.5	8	24												●							
		1000326420050	流体力学实验 Hydrodynamics Experiment	必修 Required	0.5		12													●						
		1000326420070	固体力学实验 2 Solid Mechanics Experiment 2	必修 Required	2	16	24														●					
		1000362410190	工程科学计算软件 Scientific and Engineering Computing Software	必修 Required	2	16		24														●				
		1000326490010	结构认识实习 Field Learning of Engineering Structures	必修 Required	2					2 周												●				
	毕业设计（论文） Graduation Design (Thesis)	1000362470010	毕业论文 Dissertation	必修 Required	12				12 周														●	必修 12 学分 Required 12		
素质课程 Quality Courses	体育类 Physical Education	1000321590010	体育-基础 1 Physical Education -Basics1	必修 Required	0.5				24				●											必修 4 学分 Required 4		
		1000321590020	体育-基础 2 Physical Education -Basics2	必修 Required	0.5				24					●												

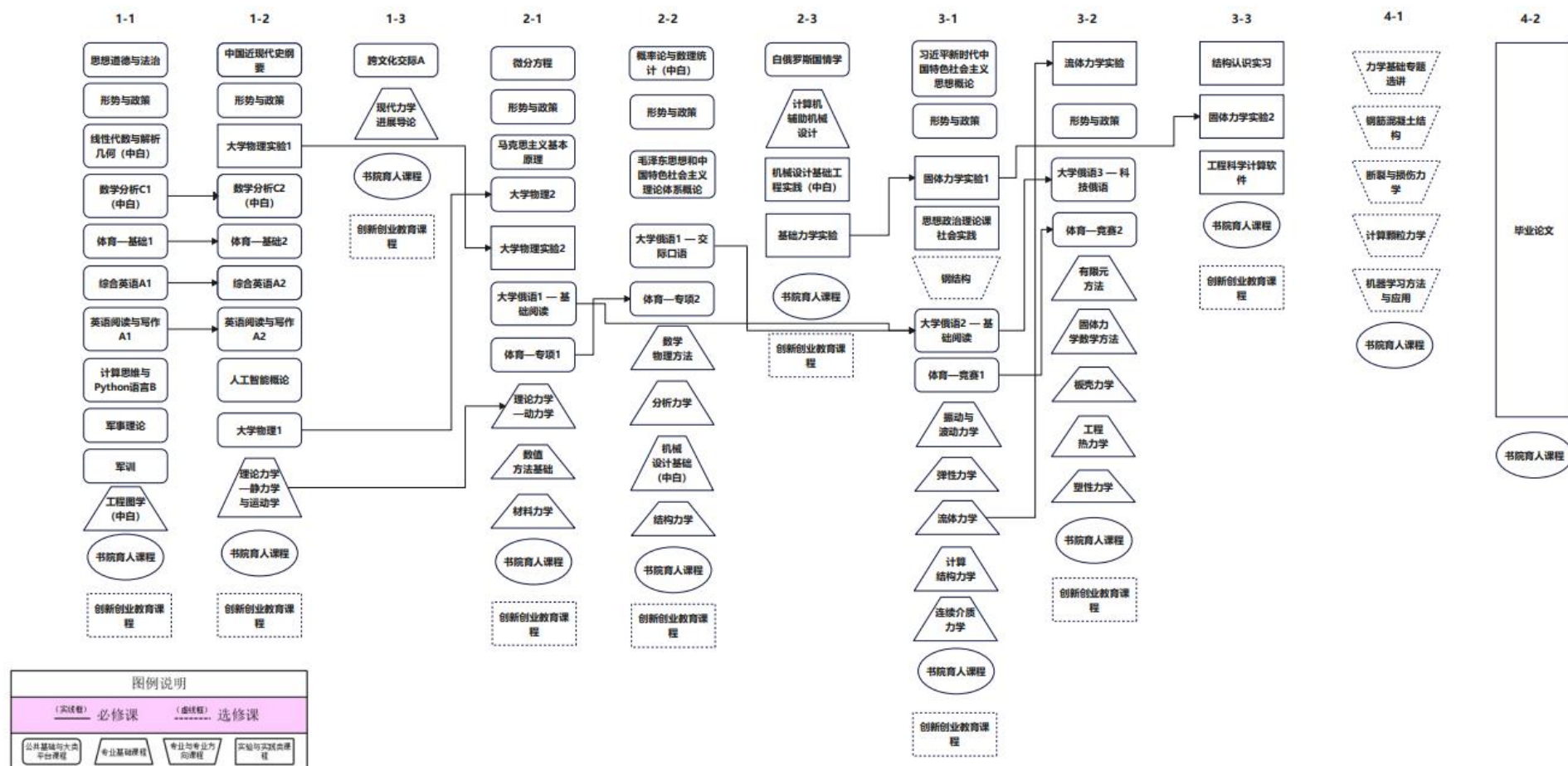
课程体系 Course System	课程类别 Course Category	课程编号 Course Number	课程名称（中英文） Course Name (Chinese and English)	课程属性 Course Properties	课内学分 Credits	课内学时 Hours					课外 Extracurricular		建议修读学期 Semester												学分要求 Credit Requirements																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		1000321590030	体育-专项 1 Physical Education -Special1	必修 Required	1				32																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															</

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							实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		1000362510030	大学俄语 2 - 基础阅读 General Russian 2-Basic Reading	必修 Required	4	64																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

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							授课 Lecturer	实践环节 Practice Sections				学分 Credits	学时 Hours	一年级 First grade			二年级 Second grade			三年级 Third grade			四年级 Fourth grade			
								实验 Lab	上机 Computer	实践 Practice	设计 Design			1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2		
			Education																							
		1000106690010	社会实践 Social Practice		必修 Required							1	24		●		●	●		●	●		●	●		
		1000106690020	劳动教育 Labour Education	社会劳动 Social Labour	选修 Elective							0.5	12		●		●	●		●	●					
		1000113690020		社区劳动 Community Labour	必修 Required								0.5	12							●					
		1000125690010		后勤劳动 Logistic Labour	选修 Elective								0.5	12		●		●	●		●	●				
		1000134690010		校园劳动 Campus Labour	选修 Elective								0.5	12		●		●	●		●	●				
		1000305690010		生产劳动（一） Productive Labour (I)	选修 Elective								1	24		●		●	●		●	●				
		1000305690020		生产劳动（二） Production Labour (II)	选修 Elective								0.5	12		●		●	●		●	●				
建议每学期修读学分 Recommended credits per semester															23.5	26	3	24	24	5	27	19	6	9	12	178.5

注 1：“形势与政策”课由马克思主义学院统一组织开课，纳入学校教学计划。按照在校学习期间开课不断线的要求，一二学年完成理论教学，三学年完成实践教学。四学年上下学期登录学生最终考核成绩。《形势与政策学习手册》参与教学管理和平时考核，学生要按照课程要求完成每学年规定的教学任务。每学期课程安排由马克思主义学院负责组织、通知。

十一、课程体系拓扑图（先修关系） / Course System Topology Map



十二、课程修读要求/ Course Enrollment Requirements

本专业第一学年重点学习英语和公共基础课程，从第二学年开始专业课程学习。
四年修读总学分数为 178.5 学分。

In the first year of this major, the focus is on studying English and general foundation courses, with professional courses beginning in the second year. A total of 178.5 credits must be earned over four years.

十三、课程体系与毕业要求关系矩阵/ Matrix of Curriculum System and Graduation Requirements

课程名称	毕业要求 Requirement 1	毕业要求 Requirement 2	毕业要求 Requirement 3	毕业要求 Requirement 4	毕业要求 Requirement 5	毕业要求 Requirement 6	毕业要求 Requirement 7	毕业要求 Requirement 8	毕业要求 Requirement 9	毕业要求 Requirement 10	毕业要求 Requirement 11
思想道德与法治 Ideological Morality and Rule of Law						●	●	●	●		●
中国近现代史纲要 Survey of Modern Chinese History						●	●	●	●		●
马克思主义基本原理 Basic Theory of Marxism						●	●	●	●		●
毛泽东思想和中国特色社会主义理论体系概论 Introduction to Mao Zedong Thought and The Theoretical System of Socialism with Chinese Characteristics						●	●	●	●		●
习近平新时代中国特色社会主义思想概论 Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era						●	●	●	●		●
形势与政策 ^[1] Current Affairs and Policy						●	●	●	●		●
思想政治理论课社会实践 Social Practice of Ideological and Political Theory Course						●	●	●	●		●
社会主义发展史概论 Introduction to the History of Socialist Development						●	●	●	●		●
中共党史 History of the Communist Party						●	●	●	●		●
中国改革开放史 History of China's Reform and Opening-up						●	●	●	●		●

课程名称	毕业要求 Requirement 1	毕业要求 Requirement 2	毕业要求 Requirement 3	毕业要求 Requirement 4	毕业要求 Requirement 5	毕业要求 Requirement 6	毕业要求 Requirement 7	毕业要求 Requirement 8	毕业要求 Requirement 9	毕业要求 Requirement 10	毕业要求 Requirement 11
中华人民共和国史 History of the People's Republic of China						●	●	●	●		●
线性代数与解析几何 (中白) Linear Algebra and Analytic Geometry (DBJI)	●	●	●	●	●						
数学分析 C1 (中白) Mathematical Analysis C1 (DBJI)	●	●	●	●	●						
数学分析 C2 (中白) Mathematical Analysis C2 (DBJI)	●	●	●	●	●						
微分方程 Differential Equations	●	●	●	●	●						
概率论与数理统计 (中白) Probability Theory and Mathematical Statistics (DBJI)	●	●	●	●	●						
大学物理 1 College Physics 1				●	●						
大学物理 2 College Physics 2				●	●						
大学物理实验 1 College Physics Experiment 1				●	●						
大学物理实验 2 College Physics Experiment 2				●	●						
计算思维与 Python 语言 B (中白) Computational Thinking and Python B (DBJI)				●	●						
人工智能概论 Introduction to Artificial Intelligence				●	●						
工程图学 (中白) Engineering Drawing (DUT-BSU)	●	●	●	●		●					
理论力学-静力学与运动学 Theoretical Mechanics-Statics and Kinematics	●	●	●	●		●					
现代力学进展导论 Introduction to the Development of Modern Mechanics	●	●	●	●		●					

课程名称	毕业要求 Requirement 1	毕业要求 Requirement 2	毕业要求 Requirement 3	毕业要求 Requirement 4	毕业要求 Requirement 5	毕业要求 Requirement 6	毕业要求 Requirement 7	毕业要求 Requirement 8	毕业要求 Requirement 9	毕业要求 Requirement 10	毕业要求 Requirement 11
理论力学-动力学 Theoretical Mechanics-Dynamics	●	●	●	●		●					
数值方法基础 Fundamental of Numerical Method	●	●	●	●		●					
材料力学 Mechanics of Materials	●	●	●	●		●					
分析力学 Analytical Mechanics	●	●	●	●		●					
结构力学 Structural Mechanics	●	●	●	●		●					
机械设计基础 (中白) Mechanical Design Basis (DBJI)	●	●	●	●		●					
数学物理方法 Methods of mathematics physics	●	●	●	●		●					
计算机辅助机械设计 Computer aided mechanical design	●	●	●	●		●					
振动与波动力学 Mechanics of Vibration	●	●	●	●		●					
弹性力学 Elasticity	●	●	●	●		●					
计算结构力学 Computational Structural Mechanics	●	●	●	●		●					
流体力学 Fluid Mechanics	●	●	●	●		●					
板壳力学 Plate and Shell Mechanics	●	●	●	●		●					
工程热力学 Thermodynamics	●	●	●	●		●					
有限元方法 Finite Element Method	●	●	●	●		●					
塑性力学 Plasticity	●	●	●	●		●					
固体力学数学方法 Mathematical methods of solid mechanics	●	●	●	●		●					
钢结构 Steel Structure	●	●	●	●		●					
钢筋混凝土结构 Reinforced Concrete Structure	●	●	●	●		●					

课程名称	毕业要求 Requirement 1	毕业要求 Requirement 2	毕业要求 Requirement 3	毕业要求 Requirement 4	毕业要求 Requirement 5	毕业要求 Requirement 6	毕业要求 Requirement 7	毕业要求 Requirement 8	毕业要求 Requirement 9	毕业要求 Requirement 10	毕业要求 Requirement 11
断裂与损伤力学 Fracture and Damage Mechanics	●	●	●	●		●					
力学基础专题选讲 Selected Lectures on Mechanical Basis	●	●	●	●		●					
连续介质力学 (本硕打通课) Continuum Mechanics	●	●	●	●		●					
计算颗粒力学 (本硕打通课) Computational Granular Mechanics	●	●	●	●		●					
机器学习方法与应用 (本硕打通课) Machine Learning Methods and Applications	●	●	●	●		●					
机械设计基础工程实践(中白) Basic Engineering Practice of Mechanical Design (DBJI)			●	●	●						
基础力学实验 Elementary mechanics experiment			●	●	●						
固体力学实验 1 Solid Mechanics Experiment 1			●	●	●						
流体力学实验 Hydrodynamics Experiment			●	●	●						
固体力学实验 2 Solid Mechanics Experiment 2			●	●	●						
工程科学计算软件 Scientific and engineering computing software			●	●	●						
结构认识实习 Field Learning of Engineering Structures			●	●	●						
毕业论文 Dissertation		●	●	●	●	●		●	●		●
体育-基础 1 Physical Education -Basics1						●	●	●			
体育-基础 2 Physical Education -Basics2						●	●	●			

课程名称	毕业要求 Requirement 1	毕业要求 Requirement 2	毕业要求 Requirement 3	毕业要求 Requirement 4	毕业要求 Requirement 5	毕业要求 Requirement 6	毕业要求 Requirement 7	毕业要求 Requirement 8	毕业要求 Requirement 9	毕业要求 Requirement 10	毕业要求 Requirement 11
体育-专项 1 Physical Education -Special1						●	●	●			
体育-专项 2 Physical Education -Special2						●	●	●			
体育-竞赛 1 Physical Education -Competition1						●	●	●			
体育-竞赛 2 Physical Education -Competition2						●	●	●			
综合英语 A1 Integrated English A1									●	●	
英语阅读与写作 A1 English Reading and Writing A1									●	●	
综合英语 A2 Integrated English A2									●	●	
英语阅读与写作 A2 English Reading and Writing A2									●	●	
跨文化交际 A Cross-culture Communication A									●	●	
大学俄语 1 - 基础阅读 General Russian 1-Basic Reading									●	●	
大学俄语 1 - 交际口语 General Russian 1-Oral Communication									●	●	
大学俄语 2 - 基础阅读 General Russian 2-Basic Reading									●	●	
白俄罗斯国情学 Culturology of Belarus									●	●	
大学俄语 - 科技俄语 General Russian - Scientific and Technological Russian									●	●	
创新创业教育课程 Innovation and Entrepreneurship Education		●	●	●	●	●		●		●	
大学生创新创业计划项目 Innovation and Entrepreneurship Program		●	●	●	●	●		●		●	