

# 交通运输专业辅修培养方案

## Program of Transportation as Minor Major

### 一、培养目标 Objectives

坚持立德树人，培养主动适应新时代中国特色社会主义现代化建设和交通运输发展需要，德、智、体、美、劳全面发展，具有突出的科学文化素养和创新意识，深厚的人文底蕴，健全的人格和健康身心，良好的社会责任感和职业道德素质，系统的轨道交通专业知识和技能，能够在交通运输特别是轨道交通领域从事规划设计、工程实施、运营管理、科学研究等工作的专业型人才。

This undergraduate Minor major program is designed to foster students' virtue through education and adapt to the needs of socialist modernization and transportation development in the new era. It emphasizes the comprehensive development of students in moral, intelligence, sports, aesthetics and labor education, as well as outstanding scientific and innovative consciousness, profound humanistic heritage, sound personality and health and good sense of social. The students in this program are equipped with strong skills of communication, teamwork, and lifelong learning, and master solid engineering knowledge, systematic rail transit expertise and skills. Students are furnished with the ability to engage incomposite talents in planning, engineering implementation, operations management, scientific research and other essential qualities in transportation, especially in rail transport.

### 二、毕业要求 Graduation Requirements

毕业要求 1 工程知识：能够将数学、自然科学、专业理论基础和技术知识用于解决交通运输领域的规划设计、运输组织等复杂工程问题。

Requirements 1 Engineering Knowledge: Ability to apply mathematics, natural science, professional theoretical basis and technical knowledge to solve the complex engineering problems in the field of transportation, such as planning, design and transportation organization.

毕业要求 2 问题分析：能够应用数学、自然科学和交通运输工程学科的基本原理识别、表达交通运输规划设计、运输组织等问题，并通过文献研究对具体的交通运输复杂工程问题进行分析，以获得有效结论。

Requirements 2 Problem Analysis: Ability to apply basic principles of mathematics, natural sciences, and transportation engineering disciplines to identify and describe the transportation planning and design, transportation organization and other problems. And based on the literature research, analyzing the specific traffic complex engineering problems, and acquiring an effective conclusion.

毕业要求 3 使用现代工具：能够针对交通运输复杂工程问题，开发、选择与使用恰当的技术、资源、现代工程工具和信息技术工具，包括对复杂工程问题的预测与模拟，并能够理解其局限性。

Requirements 3 The use of modern tools: Ability to develop, select and apply appropriate technologies, resources, modern engineering tools and information technology tools for the complex engineering problems in the field of transportation, including the prediction and simulation of complex engineering problems, and awareness of their limitations.

毕业要求 4 工程与社会：能够基于交通运输专业相关背景知识进行合理分析，评价专业工程实践和复杂工程问题解决方案对社会、健康、安全、法律以及文化的影响，并理解应承担的责任。

Requirements 4 Engineering and Society: Ability to conduct reasonable analysis based on relevant background knowledge of transportation major, evaluate the impact of professional engineering practice and complex engineering problem solutions on society, health, safety, law and culture, and understanding of the corresponding responsibilities.

毕业要求 5 环境和可持续发展：能够理解和评价针对交通运输工程领域中复杂工程问题的专业工程实践对环境、社会可持续发展的影响。

Requirements 5 Environment and Sustainable Development: Ability to understand and evaluate the impact of the professional engineering practices of complex engineering problems in the field of transportation engineering on environmental and social sustainability.

毕业要求 6 职业规范：具有人文社会科学素养、社会责任感、能够在交通运输相关问题实践中理解并遵守工程职业道德和规范，履行责任。

Requirements 6 Professional Norms: Possessing humanistic and social science literacy and social responsibility, and the ability to understand and abide by engineering professional ethics and norms in the practice of transportation problems, and fulfil responsibilities.

### 三、学分要求 Credits Requirements

课程体系 Curriculum System		学分要求 Credits Requirements						小计 Subtotal
		必修 Compulsory		限修 Distributional Electives		选修 Free Electives		
		理论 Theory	实践 Practice	理论 Theory	实践 Practice	理论 Theory	实践 Practice	
学科与专业基础课程(含实验) Discipline and Specialty Foundational Courses(Including Experiments)	专业基础课 Professional Foundational Courses	7.5	1.5	6				15
专业课程(含实验) Specialized Courses(Including Experiments)	专业核心课程 Specialized Core Course	16	0					16
总计 Total								31

### 四、课程设置 Course Programs

课程类型 Course Type	课程名称 Course Name	课程性质 Nature of Course	学分 Credits	开课学期 Semester	开课学院 School	备注 Notes
专业基础课 Professional Foundational Courses	交通运输经济 Transportation Economics	必修 Compulsory	2	第 5 学期 Semester 5	交通运输与物流学院 School of Transportation and Logistics	
	线路基础与铁路选线设计 Railway Location and Design	必修 Compulsory	2	第 4 学期 Semester 4	土木工程学院 School of Civil Engineering	

专业基础课 Professional Foundational Courses	机车车辆与列车牵引 计算 Locomotive、Vehicle and Train traction calculation	必修 Compulsory	2	第 4 学期 Semester 4	交通运输与 物流学院 School of Transportation and Logistics	
	铁路通信信号与列车 运行控制 Railway Communication Signal and Train Operation Control	必修 Compulsory	3	第 4 学期 Semester 4	交通运输与 物流学院 School of Transportation and Logistics	
	综合运输工程 Integration Transportation Engineering	限修 Distributional Elective	2	第 3 学期 Semeste 3	交通运输与 物流学院 School of Transportation and Logistics	限修 6 学 分 Distribution al Elective 6 Credits
	交通运输规划原理 Principles of Transportation Planning		2	第 5 学期 Semester 5	交通运输与 物流学院 School of Transportation and Logistics	
	交通运输安全工程 Safety Engineering		2	第 5 学期 Semester 5	交通运输与 物流学院 School of Transportation and Logistics	
运输市场与商务 Transportation Market and Business	2		第 4 学期 Semester 4	交通运输与 物流学院 School of Transportation and Logistics		
专业核心课 Specialized Core Course	行车组织 A Railway Train Operation A	必修 Compulsory	4	第 6 学期 Semester 6	交通运输与 物流学院 School of Transportation and Logistics	
	铁路站场及枢纽 A Railway Yard and Terminal A	必修 Compulsory	3	第 6 学期 Semester 6	交通运输与 物流学院 School of Transportation and Logistics	
	铁路货物运输组织 A Railway Freight Transport Organization A	必修 Compulsory	3	第 6 学期 Semester 6	交通运输与 物流学院 School of Transportation and Logistics	
	铁路旅客运输组织 Railway Passenger Transport Organization	必修 Compulsory	2	第 7 学期 Semester 7	交通运输与 物流学院 School of Transportation and Logistics	
	交通运输统计 Transportation Statistics	必修 Compulsory	2	第 5 学期 Semester 5	交通运输与 物流学院 School of Transportation and Logistics	
	铁路规章 Technical Regulations of Railway Operation	必修 Compulsory	2	第 7 学期 Semester 7	交通运输与 物流学院 School of Transportation and Logistics	
总学分 Total Credits			31			