

# 交通运输工程 (0823)

## Transportation Engineering

学科门类：工学 (08) 一级学科：交通运输工程 (082300)

Discipline: Engineering (08)

First-Class Discipline: Transportation Engineering (082300)

### 一、学科简介

交通运输工程学科创建于 2000 年，2001 年获“交通运输工程”硕士学位授权二级学科点，2008 年被评为校品牌专业，2010 年获硕士学位授权一级学科点，在 2015 年江苏省硕士学位授权一级学科点评估中获评优秀，2016 年在土木工程学科下设“道路与交通工程”二级博士点，是校级重点学科。

学科涉及交通基础设施工程、交通运输规划与管理、交通安全与环境、地下交通工程等四个具有显著河海特色的研究领域。现有专任教师 33 人，博士研究生导师 3 人，硕士研究生导师 20 人；国家级人才计划 1 人，江苏省高校“青蓝工程”中青年学术带头人 1 人，江苏省双创博士 1 人。依托江苏省交通工程技术中心等省部级实验平台，获得国家科技进步一等奖 1 项、教育部科技进步二等奖 2 项、中国公路学会科学技术特等奖 1 项以及其他行业协会科技奖等多项荣誉。研究成果成功应用于长三角、珠三角、西非几内亚湾等地道路交通与地下隧道的规划、设计、建设及运营等项目。学科已成为我国极具特色的交通运输工程学科教学科研基地。

#### I. Discipline Overview

The discipline of Transportation Engineering was founded in 2000. In 2001, the discipline was qualified for granting master degree in the second level discipline of Transportation Engineering. Also, the discipline was evaluated as the brand major of Hohai University in 2008 and it was qualified for granting master degree in the first level discipline of Transportation Engineering in 2009. Then, the discipline was awarded excellent in the evaluation of the first level discipline authorized by Jiangsu Province for master's degree in 2015. The second level doctoral program of "Road and Traffic Engineering" was established under the discipline of civil

engineering in 2016 , which is a key discipline of Hohai University.

The discipline involves four research fields with distinctive hohai characteristics, namely traffic infrastructure engineering, transportation planning and management, traffic safety and environment, and underground traffic engineering. At present, there are 33 full-time teachers, 3 doctoral tutors and 20 master tutors; 1 national Talent Plan, 1 young and middle-aged academic leader of "Qinglan Project" of Universities in Jiangsu Province, 1 doctor of entrepreneurship and innovation in Jiangsu Province. Relying on the provincial and ministerial-level experimental platforms such as Jiangsu Transportation Engineering Technology Center, it has won one first prize of National Science and Technology Progress award, two second prizes of Science and Technology Progress Award of Ministry of Education, one Special prize of Science and Technology award of Chinese Highway Academy, and science and technology award of other industry associations, etc. The research results have been successfully applied in many projects such as planning, design, construction and operation of road traffic and underground tunnels in the Yangtze River Delta, the Pearl River Delta, and the Gulf of Guinea in West Africa. The discipline has already become a full-featured teaching and research base in the area of Transportation Engineering in China.

## 二、培养目标

1. 河海大学硕士层次外国留学生应当在交通运输学科领域中具有较好的国际视野，能够在多个国家的实际环境中运用和发展交通运输学科的知识、技能和方法，并具备参与国际事务和国际竞争的能力。

2. 以英语为专业教学语言的学科、专业中，外国留学生毕业时，硕士研究生的中文能力应当至少达到《国际汉语能力标准》三级水平。

3. 掌握坚实的基础理论和系统的专门知识，具有从事科学研究工作或独立担负专门技术工作的能力，能够解决交通运输工程中的工程技术问题。

## II. Training Objectives

1. International master graduates of Hohai University are expected to have good international view, to

apply and develop the theories, skills, and methodologies in the actual environment of several countries, and to participate in the international academic affairs.

2. International master graduates must meet the requirement of Level 3 in Chinese Language Proficiency Scales upon graduation if they conduct their coursework in English.

3. International master graduates must acquire fundamental knowledge and systematic engineering professions in Transportation Engineering, have the ability to engage in scientific research work or independently undertake specialized technical work, and can solve engineering and technical problems in transportation engineering.

### 三、主要研究方向

1. 交通基础设施工程
2. 交通运输规划与管理
3. 交通安全与环境
4. 地下交通工程

### III. Research Directions

1. Traffic Infrastructure Engineering
2. Transportation Planning and Management
3. Traffic Safety and Environment
4. Underground Traffic Engineering

### 四、学制和学习年限

学术学位全英文硕士留学研究生的标准学制为 3 年。实行弹性学制，学习年限最短不少于 2 年，最长不超过 5 年。

### IV. Number of Years Requirement

The master program typically requires 3 years to complete. However, the completing time may vary to 2 years as the minimum, and 5 years as the maximum.

## 五、学分要求和课程设置

1. 学术学位全英文硕士留学研究生课程总学分为 28 学分，其中学位课程为 21 学分，非学位课程为 7 学分。另设教学环节。所有课程学习一般应在入学后 1 年内完成。

2. 汉语课每学分为 24 学时，中国概况课每学分为 18 学时，其他课程每学分为 16 学时。

3. 中国国情教育（水韵课堂）为系列专题讲座，要求学生按照要求完成规定的学习任务。

4. 对于汉语水平已达到毕业要求的学生，可申请免修汉语，具体要求详见留学生课程免修有关规定。

具体课程设置如下：

### V. Credit Requirements and Curriculum Provision

1. International academic master students will complete 28 credits generally, 21 of which are from degree courses, and 7 of which are from non-degree courses. Students will also complete academic activities. Coursework will be completed in one year after registration.

2. Each credit of Chinese language course is 24 credit hours. Each credit of Introduction to China is 18 credit hours. For other courses, each credit is 16 credit hours.

3. “Water Harmony Lectures” is a series of seminars, which requires students to complete the specified learning tasks.

4. For students who meet the Chinese language requirement for the PhD degree, Chinese language courses can be exempted, of which the details can be referred to in relevant documents.

The specific curriculum provision is as follows:

交通运输工程全英文学术型留学硕士研究生课程设置

Curriculum for English Taught International Academic Master Students in Transportation Engineering

课程类别 Category	课程编号 Course Code	课程名称 Course Name	学分 Credit	学时 Hours	开课学期 Term	备注 Remarks	
学位课程 Degree Course 21 学分	公共课程 General Course	2022LM000001	汉语 I Chinese Language I	2	48	秋 Autumn	必修 Compulsory
		2022LM000002	汉语 II Chinese Language II	2	48	春 Spring	
		2022LM000003	中国概况 Introduction to China	2	36	秋 Autumn	
		2022LM110001	论文写作指导 Guide of Thesis Writing	2	32	秋、春 Autumn /Spring	
	基础课程 Basic Course	2022LM880001	矩阵论 Matrix Theory	2	32	春 Spring	选修 7 学分 Optional 7 credits at least
		2022LM880002	最优化方法 Optimization Methods	2	32	秋 Autumn	
		2022LM880003	数值分析 Numerical Analysis	3	48	秋 Autumn	
		2022LM770003	弹性力学 Elastic Mechanics	2	32	秋 Autumn	
		2022LM991501	工程经济学 Engineering Economy	2	32	春 Spring	必修 Compulsory
	专业课程 Major Course	2022LM040501	交通工程学 Traffic Engineering	3	48	春 Spring	选修 4 学分 Optional 4 Credits at least
		2022LM040502	交通控制 Traffic Control	2	32	春 Spring	
		2022LM040503	交通规划 Traffic planning	2	32	春 Spring	
		2022LM040601	路面工程 Pavement Engineering	2	32	春 Spring	
		2022LM040602	高等路基工程 Advanced Subgrade Engineering	2	32	春 Spring	
	非学位课程 Non-degree Course 7 学分	2022LM110002	中国国情教育（水韵课堂） Water Harmony Lectures	1	16	秋、春 Autumn /Spring	必修 Compulsory
2022LM040504		智能交通系统 Intelligent Transportation System	2	32	春 Spring	选修 6 学分 Optional 6 Credits at least	
2022LM040505		城市交通网络分析 Urban Transportation Network Analysis	2	32	春 Spring		
2022LM040506		道路交通安全 Road Traffic Safety	2	32	秋 Autumn		
2022LM040507		物流工程 Logistics Engineering	2	32	春 Spring		
2022LM770002		塑性力学 Plasticity Mechanics	2	32	春 Spring		
2022LM040603		高等路面材料 Advanced Pavement Materials	2	32	春 Spring		
2022LM040103		基础工程分析 I Foundation Analysis I	2	32	春 Spring		
选修硕士课程 Optional courses for master							选修 Optional
教学环节 Academic Activity	学术活动（含博导讲座） Seminar and Conferences (including lecturers by PhD advisors)						必修 Compulsory
	实践活动 Practice Activity						
	科学研究 Scientific Research						

## 六、教学环节

### 1. 个人培养计划

学术学位硕士研究生入学后，应在导师指导下，在规定时间内按照培养方案和学位论文工作有关规定，结合研究方向和本人实际情况制定个人培养计划，其中学习计划在入学 2 个月内提交。

### 2. 学术活动

学术学位硕士研究生学术活动包括参加国内外学术会议、专家学术讲座，以及研究生学术研讨活动等。申请学位论文答辩前必须参加 10 次以上的学术交流活动，其中博导讲座至少 2 次。研究生参加学术活动必须填写相关学术活动登记本。

### 3. 实践活动

为培养劳动实践能力和责任意识，学术学位硕士研究生必须参加实践活动，实践活动形式包括助教、助管、助研、生产实践、社会实践等。由导师对学生实践环节的时长和效果进行考核和评价。

## VI. Academic Activities

### 1. Study Proposal

The master students must prepare a proposal on how they will complete the master degree by considering their research interests, advice from their research advisors, and other requirements mentioned in this document. The proposal must be submitted in two months after official registration.

### 2. Seminars and Conferences

Master students must participate in academic conferences, talks by experts, seminars by PhD advisors, and discussion panels. Before they apply for the master degree, master students must participate in seminars and conferences over 10 times, including 2 seminars by PhD advisors. All the seminars and talks should be recorded in relevant record book.

### 3. Practical Activities

Master students are required to participate in practice activities to prepare professional development. Practice activities include teaching assistantship, research assistantship, management assistantship, and industry engagement etc., that are to be assessed by the advisors.

## 七、论文工作

学术学位硕士学位论文研究工作必须经过文献阅读、论文选题、论文计划及开题报告、论文中期检查、科研成果产出、学位论文预审、学位论文评阅、学位论文答辩等环节。具体按照《河海大学硕士学位论文工作管理办法》和学院相关文件执行。留学硕士研究生可使用英文撰写论文。

### VII. Dissertation

The dissertations of academic master students are required to complete the stages of literature review, topic selection, dissertation plan and dissertation proposal, mid-term examination, output of scientific research achievements, pre-examination, review and assessment, and dissertation defense. Detailed requirements can be referred to in “Hohai University Master's Dissertation Management Measures” and relevant documents in College of Civil and Transportation Engineering. Dissertation in English is acceptable.

## 八、本学科推荐阅读的重要书目、专著和学术期刊

### VIII. Recommended Bibliographies, Monographs and Academic Journals of the Discipline

1. 冉斌,张健. 交通运输前沿技术导论[M].北京:科学出版社,2017.
2. 李力等. 现代交通流理论与应用[M].北京:清华大学出版社,2011.
3. 冉斌. 智慧高速公路信息采集技术与应用[M].北京:人民交通出版社,2017.
4. 陆化普. 交通规划理论与方法[M].北京:清华大学出版社,2018.
5. 郑长江. 城市交通行人过街信号与交叉口信号联动控制方法研究[M]. 南京:河海大学出版社, 2013.
6. 陈峻等. 交通管理与控制(第二版)[M].北京:人民交通出版社,2016.
7. 黄晓明等. 路面结构设计原理与方法[M].北京:人民交通出版社,2015.
8. 李立寒等. 道路工程材料(第五版)[M].北京:人民交通出版社,2016.
9. 孔纲强. 特殊路基工程[M].北京:科学出版社,2014.
10. 李国维. 公路软土地基超载预压控制沉降理论研究与实践[M].南京:河海大学出版社,2013.
11. 李志农等. 风积沙路基公路设计施工与防沙[M].上海:上海科学技术出版社,2018.
12. 凌天清. 道路工程(第四版)[M].北京:人民交通出版社,2016.
13. 黄晓明. 路基路面工程(第六版)[M].北京:人民交通出版社,2019.
14. 杨晓光, 白玉. 交通设计[M].北京:人民交通出版社,2015.
15. 项乔君. 道路交通设计[M].北京:人民交通出版社,2017.
16. 潘福全等. 交通安全工程[M].北京:机械工业出版社,2018.
17. 陆键等. 公路平面交叉口交通安全设计理论与方法[M].北京:科学出版社,2009.
18. 陆键等. 公路交通安全设计理论与方法[M].北京:科学出版社,2011.
19. 欧国立. 运输市场学[M].北京:中国铁道出版社,2018.

20. 巴顿. 运输经济学[M].北京:机械工业出版社,2012.
21. 盛海洋,邹定南. 道路工程检测技术[M].武汉:华中科技大学出版社,2016.
22. 乔志琴. 公路工程试验检测 (第二版) [M].北京:人民交通出版社,2017.
23. 赵卫平. 路基路面检测技术[M].北京:人民交通出版社,2016.
24. 黄晓明,刘寒冰. 交通基础设施检测与养护技术[M].北京:清华大学出版社,2010.
25. 姚玲森. 桥梁工程[M].北京:人民交通出版社,2004.
26. 任福田等. 交通工程学 (第三版) [M].北京:人民交通出版社,2017.
27. 吴兵等. 交通管理与控制 (第五版) [M].北京:人民交通出版社,2015.
28. 胡思继,邵春福. 交通运输学 (第二版) [M].北京:人民交通出版社,2017.
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30. Kerner B. S.. Introduction to Modern Traffic Flow Theory and Control[M].Springer Berlin Heidelberg,2009.
31. Roess R.P.,Prassas E.S.,Mcshane W.R. Traffic Engineering[M]. Pearson,2011.
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33. de Dios Ortúzar J,Willumsen L G. Modelling transport[M].John Wiley & Sons,2011.
34. Sheffi Y. Urban transportation networks[M].Prentice-Hall,1985.
35. Rajib B. Mallick,Tahar El-Korchi,Pavement Engineering: Principles and Practice, Third Edition[M].CRC Press,2017.
36. John D. Nelson,Debora J. Miller,Expansive Soil[M]. Wiley-Interscience, 1992.
37. 中国公路学报. 长安大学出版社
38. 交通运输工程学报. 长安大学出版社
39. 交通运输系统工程与信息. 北京交通大学出版社

40. 同济大学学报（自然科学版）. 同济大学出版社
41. 东南大学学报（自然科学版）. 东南大学出版社
42. 西南交通大学学报. 西南交通大学出版社
43. 华南理工大学学报（自然科学版）. 华南理工大学出版社
44. 交通信息与安全. 武汉理工大学出版社
45. 武汉理工大学学报（交通科学与工程版）. 武汉理工大学出版社
46. 城市规划学刊. 同济大学出版社
47. 吉林大学学报（工学版）. 吉林大学出版社
49. Journal of Traffic and Transportation Engineering (English Edition) Chan'an University
50. Journal of Southeast University(English Edition) . Southeast University Press
51. Transportation Research Part B-Methodological. Elsevier Ltd
52. IEEE Transactions on Intelligent Transportation Systems. Institute of Electrical and Electronics Engineers Inc.
53. Computer-aided Civil and Infrastructure Engineering. Wiley-Blackwell Publishing Ltd
54. Transportation Research Part C-Emerging Technologies. Elsevier Ltd
55. Transportation. Springer US
56. European Journal of Operational Research. Elsevier Ltd
57. Transportation Research Part E-Logistics and Transportation Review. Elsevier Ltd
58. Sustainable Cities and Society. Elsevier Ltd
59. Safety Science. Elsevier Ltd
60. Transportation Research Part D-Transport and Environment. Elsevier Ltd
61. Transportation Research Part A-Policy and Practice. Elsevier Ltd
62. Transportation Science. INFORMS Institute for Operations Research and the Management Sciences

63. Accident Analysis & Prevention. Elsevier Ltd
64. Analytic Methods in Accident Research. Elsevier Ltd
65. Networks & Spatial Economics. Springer US
66. Transportation Research Part F-Traffic Psychology and Behaviors. Elsevier Ltd
67. Journal of Safety Research. Elsevier Ltd
68. Journal of Transportation Engineering Part A-Systems American Society of Civil Engineers (ASCE)
69. Transportation Research Record. US National Research Council
70. Transportmetrica A-Transport Science. Taylor and Francis Inc.
71. Transportmetrica B-Transport Dynamics. Taylor and Francis Inc.
72. Journal of Intelligent Transportation Systems. Taylor and Francis Ltd.
73. Transportation Planning and Technology. Taylor and Francis Ltd.
74. IET Intelligent Transport Systems. Wiley
75. Transport Reviews. Taylor and Francis Ltd.
76. Transport Policy. Elsevier Ltd
77. Journal of Transport Geography. Elsevier Ltd
78. Journal of Transport & Health. Elsevier Ltd
79. Traffic Injury Prevention. Taylor and Francis Ltd.
80. Journal of Transport Economics and Policy. University of Bath
81. Journal of Transportation Safety and Security. Taylor and Francis Ltd.
82. Journal of Transport and Land Use. University of Minnesota
83. Injury Prevention. BMJ Publishing Group
84. Journal of Homeland Security and Emergency Management. Walter de Gruyter
85. Journal of Risk Research. Taylor and Francis Ltd.