管理科学与工程（1201）
Management Science and Engineering

学科门类：管理学（12）　一级学科：管理科学与工程（1201）

Discipline: Management (12)

First-Class Discipline: Management Science and Engineering (1201)

一、学科简介

河海大学管理科学与工程学科 1995 年获硕士学位授权，2003 年获博士学位授权，2006 年项目管理与工程管理被评为江苏省重点学科，2007 年获批博士后流动站。先后获得了“十一五”国家优势学科创新平台、“十二五”江苏省高校优势学科资助、“十三五”江苏高校优势学科建设工程三期项目资助。工程管理专业四次通过住建部评估并入选国家“双万计划”一流本科专业。在教育部第四轮学科评估中获评 B+。

学科发展“入主流，有特色”。拥有 16 个省部级科研平台，学科方向是国家重点实验室、国家工程中心的主干研究方向之一。学科建设有大数据中心和云平台教学实验室、商务数据实验室、工程管理与信息化实验室等前沿研究平台，承担国家自然科学基金重点项目，国家社科基金重大项目、国家重点研发计划、等国家省部级基金项目 100 项以上。管理科学与系统工程、项目管理与工程管理等学科方向实力雄厚，已通过 PMI、IPMP 国际认证；在水资源配置、跨流域调水工程管理等领域具有明显优势，为三峡工程、南水北调、长江大保护等重大工程提供人才培养和技术支撑。现有双聘院士 1 人，长江学者特聘教授 1 人，入选省部级人才项目 8 人次，教育部创新团队 1 个，江苏省高校创新团队 3 个。

I. Discipline Overview

The discipline of Management Science and Engineering of Hohai University was authorized as master's degree in 1995 and doctor's degree in 2003. In 2006, project Management and engineering Management was

awarded as a key discipline of Jiangsu Province. In 2007, it was approved as post-doctorate research station. It has successively obtained the "11th Five-Year plan" National Preponderant Discipline Innovation platform, the "12th Five-year Plan" Jiangsu University Preponderant Discipline funding, and "13th Five-Year plan" Jiangsu University Preponderant Discipline construction project. The program of Engineering Management has been evaluated by the Ministry of Housing and Urban-Rural Development for four times and selected as the first-class undergraduate program of the National "Double 10,000 Program". In the fourth round of subject assessment by the Ministry of Education, it was awarded B+.

Discipline development orients to the mainstream and characteristics. It has 16 provincial and ministerial scientific research platforms, and the discipline direction is one of the main research directions of the State Key laboratory and national Engineering Center. The discipline has established cutting-edge research platforms such as big data center, cloud platform teaching laboratory, business data laboratory, engineering Management and Information Laboratory, and has undertaken more than 100 national provincial and ministerial fund projects, including key projects of national Natural Science Foundation of China, major projects of National Social Science Foundation of China, and national Key RESEARCH and development Program. Management Science and Systems Engineering, project Management and Engineering Management and other disciplines have strong strength, and has passed PMI, IPMP international certification. It dominates in water resources allocation and inter-basin water transfer project management, providing personnel training and technical support for the three Gorges Project, South-to-North water diversion project, Yangtze River protection and other major projects. At present, there are a double-employed academician and eight experts supported by provincial and ministerial talent projects, 1 innovation team from the Ministry of Education and three innovation teams from universities in Jiangsu Province.

二、培养目标

1. 河海大学硕士层次外国留学生应当在管理科学与工程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管理科学与工程的知识、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. 了解中国文化并具备汉语日常交流能力。具有服务国家和人民的高度社会责任感、良好的职业道德和创业精神、科学严谨和求真务实的学习态度和工作作风，身心健康，德智体美劳全面发展。具有艰苦朴素、实事求是、严格要求、勇于探索的科学精神；具有从事科学研究工作或独立担负专门技术工作的能力。

II. Discipline Objectives

1. International master graduates of Hohai University are expected to have good international view in the fields of Management Science and Engineering; 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 should understand Chinese culture and have the ability of daily communication. It has a high sense of social responsibility to serve the country and the people, good professional ethics and entrepreneurial spirit, scientific rigorous and pragmatic learning attitude and work style, physical and mental health, moral, intellectual, physical, aesthetic and labor comprehensive development. Has the hard simple, realistic, strict request, courage to explore the scientific spirit; has the ability to engage in scientific research or independently undertake specialized technical work.

三、主要研究方向

1. 管理科学与系统工程

2. 项目管理与工程管理

3. 信息管理与电子商务

4. 金融工程与投资管理

III. Research Directions

1. Management Science and System Engineering

2. Project Management and Engineering Management

3. Information Management and Electronic Commerce

4. Financial Engineering and Investment Management

四、 学制和学习期限

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 20 学分，非学位课程为 8 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

1. International academic master students will complete 28 credits , 20 of which are from degree courses, and 8 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 require students to complete the specified learning tasks.

4. For students who have met the Chinese language requirement for the master degree, Chinese language courses can be exempted, of which the details can be referred to in relevant regulations.

The specific curriculum is as follows:

管理科学与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 Majoring in Management Science and System Engineering

课程类别 Category		课程代码 Course Code	课程名称 Course Name	学分 Credit	学时 Hours	学期 Term	备注 Remarks
学位课程 Degree Course 20 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	2022LM550001	高级管理学 Advanced Management	2	32	秋 Autumn	选修 4 学分 Optional 4 credits at least
		2022LM991501	工程经济学 Engineering Economy	2	32	春 Spring	
		2022LM550002	高级经济学 Advanced Economics	2	32	秋 Autumn	
		2022LM991503	运营管理 Operations Management	2	32	春 Spring	选修 4 学分 Optional 4 credits at least
		2022LM991502	运筹学 Operations Research	2	32	秋 Autumn	
		2022LM991505	应用统计与计量模型 Applied Statistics and Econometric Models	2	32	春 Spring	
	专业课程 Major Course	2022LM150202	管理研究方法 Research Methods of Management	2	32	春 Spring	选修 4 学分 Optional 4 credits at least
		2022LM150203	项目管理 Project Management	2	32	秋 Autumn	
		2022LM150201	管理信息系统 Management Information System	2	32	春 Spring	
		2022LM150301	战略管理 Strategic Management	2	32	秋 Autumn	
非学位课程 Non-degree Course 8 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
		2022LM150304	公司财务分析 Corporate Finance Analysis	2	32	春 Spring	选修 7 学分 Optional 7 credits at least
		2022LM150102	国际贸易学 International Trade	2	32	秋 Autumn	
		2022LM150305	金融经济学 Financial Economics	2	32	秋 Autumn	
		2022LM150204	工程管理中的计算机应用 Computer Applications in Construction	2	32	秋 Autumn	
		2022LM150303	会计学 Accounting	2	32	春 Spring	
		选修硕士课程 Optional courses for masters					选修 Optional
教学环节 Academic Activity		学术活动（含博导讲座） Seminar and Conferences (including seminars 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 study 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 Presentations

Master students must participate in academic conferences, seminars by experts and PhD advisors, and discussion panels. Before their dissertation defense, master students must participate in seminars and conferences over 10 times, including at least 2 seminars by PhD advisors. All the seminars and presentations should be recorded in relevant record book.

3. Practice 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., which 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》和商学院相关文件执行，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 Business School. 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. Shai Shalev-Shwartz, Shai Ben-David. Understanding Machine Learning: From Theory to Algorithms. Cambridge University Press, 2014.

2. Sebastian Raschka, Vahid Mirjalili. Python Machine Learning - Second Edition: Machine Learning and Deep Learning with Python, scikit-learn, and TensorFlow. Packt Publishing, 2017.

3. Eakambaram, S., Salomi, M. Least Absolute Error Estimation of Linear and Nonlinear Regression. Lambert Academic Publishing, 2020.

4. Michael T. Goodrich. Data Structures and Algorithms in Python. Wiley,2013

5. Kevin P. Murphy. The Machine Learning: A Probabilistic Perspective. MIT Press Publication, 2012.

6. Zimányi. Business Intelligence and Big Data. springer, 2018.

7. Ioannis Vlahavas. Artificial Intelligence for Advanced Problem Solving Techniques. Information Science Publishing, 2008

8. Abelson, Harold. Structure and Interpretation of Computer Programs. The MIT Press, 1996.

9. Dawn E. Holmes. Big Data: A Very Short Introduction. Oxford University Press, 2018.

10. LeMahieu, Wilfried. Principles of Database Management. Cambridge University Press, 2018.

11. Richard B. Peiser, David Hamilton. Professional Real Estate Development: The ULI Guide to the Business (Third Edition), Urban Land Institute, 2012.

12. James Taylor. Project Scheduling and Cost Control: Planning, Monitoring and Controlling the Baseline. J. Ross Publishing, 2007.

13. Mark Perry. Business Driven PMO Setup: Practical Insights, Techniques and Case Examples for Ensuring Success. J. Ross Publishing, 2009.

14. Wilfred Abraham, MariaIsabel De Almeida A. Fidic: An Analysis of International Construction. Kluwer LawInternational, 1988.

15. M. Kemal Atesmen. Project Management Case Studies and Lessons Learned. Auerbach Publications, 2017.

16. Lecture notes in management and industrial engineering. Project Management and Engineering Research. Springer, 2019.

17. Walter V., Bud Haslett. Risk Management: Foundations for a Changing Financial world. Wiley, 2000.

18. Terje Aven,OrtwinRenn. Risk Management and Governance: Concepts, Guidelines. Springer, 1988.

19. Millot, Patrick. Risk Management in Life Critical Systems. Wiley, 2014.

20. Paul Sanghera. PMP in Depth: Project Management Professional Study. Course Technology Inc, 1988.

21. Taha, Hamdy A. Operations research: an introduction (ninth version). Pearson, 2013.

22. 吴凤平，陈艳萍．现代决策方法．南京：河海大学出版社，2011．

23. 薛薇．SPSS 统计分析方法及应用．北京：电子工业出版社，2004．

24. 齐二石．现代工业工程与管理．天津：天津大学出版社，2007．

25. 李明．管理信息系统．北京：清华大学出版社，2013．

26. 谢识予．经济博弈论．上海：复旦大学出版社，2004．

27. 汪应洛．系统工程．北京：机械工业出版社，2011．

28. 唐·钱斯（Don M. Chance），译者：丁志杰．衍生工具与风险管理．北京：机械工业出版社，2010．

29. 王卓甫等．工程项目管理：理论、方法与应用．北京：中国水利水电出版社，2009．

30. 王卓甫等．建设工程交易理论与交易模型．北京：中国水利水电出版社，2011．

31. 杨高升等．工程项目管理：合同策划与履约．北京：中国水利水电出版社，2011．

32. 施建刚．房地产开发与管理．上海：同济大学出版社，2007．

33. 兰峰．房地产项目策划．西安：西安交通大学出版社，2009．

34. 韩家炜（Han, J）等，范明等译．数据挖掘：概念与技术．北京：机械工业出版社，2013．

35. 贾俊平，谭英平主编．应用统计学（第 2 版）．北京：中国人民大学出版社，2013．

36. 罗斯（SheldonM. Ross）译者：龚光鲁（译者）．应用随机过程：概率模型导论．北京：人民邮电出版社，2011。

37. 《运筹学》教材编写组．运筹学（第四版），北京：清华大学出版社，2012。

38. 斯威尼等著，雷平等译．商务与经济统计（精要版）．北京：机械工业出版社，2012．

39. 王众托．系统工程．北京：北京大学出版社，2010．

40. NNHMIASS. Production and Operations Analysis(Fifth Edition), Santa Clara University, 2004．

41. CHOPRAS, MEINDLP. Supply Chain Management—Strategy, Planning & Operations(Third Edition), Prentice Hall, 2007．

42. HANJ, KAMBERM, PEIJ. Data Mining: Concepts and Techniques(Third Edition), Elsevier, 2012．

43. 范英，焦建玲.石油价格:理论与实证.科学出版社，2008.

44. 范英 等.中国能源安全研究. 科学出版社，2013.

45. 周德群. 能源软科学研究进展. 科学出版社，2010.

46. 琼·罗宾逊，约翰·伊特韦尔 著；陈彪如译，现代经济学导论，商务印书馆，2008.

47. David Anderson et al. Fundamentals of Business statistics. South-Western, a part of Gengage learning, 2011.

48. Litterman B. Modern investment management: an equilibrium approach. Wiley, 2004.

49. 王新平. 管理系统工程[M

50. 王新平. 管理系统工程:方法论及建模[M

51. 陆彦. 工程管理信息系统[M

52. 张静晓, 吴涛. 工程管理信息系统[M

53. 谢尔曼. 系统成本工程:项目经济承受性管理与成本控制[M

54. 符长青, 明仲. 信息系统工程项目管理[M

55. 魏忠, 张芳芳, 李燕. 信息系统工程项目管理[M

56. 白思俊. 系统工程导论(高等学校项目管理系列规划教材)[M

57. 宋伟. 项目管理学[M

58. 王祖和. 现代工程项目管理[M

59. 戎贤. 工程建设项目管理[M

60. 项目管理协会. 项目管理知识体系指南(PMBOK 指南)(第 4 版)[M

61. 哈罗德 科兹纳, 科兹纳, 杨爱华. 项目管理:计划、进度和控制的系统方法[M

62. 汪小金. 项目管理方法论[M

63. 李伯鸣, 卫明, 徐关潮. 工程项目管理信息化[M

64. 刘占省, 赵雪锋. BIM 技术与施工项目管理[M

65. 赖一飞. 项目管理概论[M

66. 学术期刊：管理世界，国务院发展研究中心.

67. 学术期刊：管理科学学报，国家自然科学基金委员会管理科学部.

68. 学术期刊：经济研究，中国社会科学院经济研究所.

69. 学术期刊：系统工程理论与实践，中国系统工程学会.

70. 学术期刊：经济研究，中国社会科学院经济研究所.

71. 学术期刊：中国社会科学，中国社会科学院.

72. 学术期刊：金融研究，中国金融学会.

73. 学术期刊：统计研究，中国统计学会、国家统计局统计科学研究所.

74. 学术期刊：管理评论，中国科学院研究生院.

75. 学术期刊：管理科学学报，国家自然科学基金委员会管理科学部.

76. 学术期刊：系统工程学报，中国系统工程学会

77. 学术期刊：中国工业经济，中国社会科学院工业经济研究所

78. 学术期刊：中国管理科学，中国优选法统筹法与经济数学研究会、中国科学院科技政策与管理科学研究所

79. 学术期刊：中国软科学，中国软科学研究会

80. 学术期刊：管理评论，中国科学院研究生院

81. 学术期刊：管理学报，华中科技大学

82. 学术期刊：管理学季刊，中山大学管理学院

83. 学术期刊：系统管理学报，上海交通大学

84. 学术期刊：《人民日报》理论版，人民日报社

85. 学术期刊：《光明日报》理论版，光明日报社

86. 学术期刊：Management Science, Informs.

87. 学术期刊：European Journal of Operational Research, Elsevier.

88. 学术期刊：Journal of Finance, Wiley-Blackwell.

89. 学术期刊：Journal on Computing, Informs.

90. 学术期刊：Information Systems Research, Informs.

91. 学术期刊：Journal of the American Statistical Association, Taylor & Francis.

92. 学术期刊：Project Management Journal, Wiley Periodicals, Inc.

93. 学术期刊：Expert Systems with Applications, Elsevier.

94. 学术期刊：Information Systems Research , Informs

95. 学术期刊：ENGINEERING , ELSEVIER

96. 学术期刊： ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE , PERGAMON-ELSEVIER SCIENCE LTD

97. 学术期刊： IEEE SYSTEMS JOURNAL , IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC

98. 学术期刊： JOURNAL OF SYSTEMS SCIENCE & COMPLEXITY , SPRINGER HEIDELBERG

99. 学术期刊： MANAGEMENT SCIENCE , INFORMS

100. 学术期刊： RELIABILITY ENGINEERING & SYSTEM SAFETY , ELSEVIER SCI LTD

101. 学术期刊： INTERNATIONAL JOURNAL OF PROJECT MANAGEMENT , ELSEVIER SCI LTD

102. 学术期刊： PROJECT MANAGEMENT JOURNAL , SAGE PUBLICATIONS INC

103. 学术期刊： Renewable & Sustainable Energy Reviews , Elsevier BV

104. 学术期刊： Water Research , Elsevier BV

105. 学术期刊： Automation in Construction , Elsevier BV

106. 学术期刊： Building and Environment , Elsevier Ltd

107. 学术期刊：Building Research and Information , Taylor & Francis