

工业工程专业辅修培养方案

Minor Training Program for Industrial Engineering

一、培养目标 Objectives

本专业面向现代工业及服务业，培养具备扎实的自然科学、工程科学基础，又掌握现代管理科学理论、工业工程专业方法与技能，具有良好的人文素养、职业素质、国际视野、创新精神和社会责任感，能够对工业与服务系统进行规划、设计、控制、评价、改进与创新，提高生产与服务系统效率，促进资源的有效利用，改善人们生活质量，推动经济发展和社会进步的工程与管理复合型专门人才。

This program is oriented towards modern industry and the service sector, aiming to cultivate individuals who possess a solid foundation in natural and engineering sciences, coupled with a grasp of modern management theory, industrial engineering methods, and skills. These individuals are expected to exhibit strong humanistic qualities, professional attributes, an international perspective, innovative thinking, and a sense of social responsibility. They should be capable of planning, designing, controlling, evaluating, improving, and innovating industrial and service systems, enhancing production and service efficiency, promoting efficient resource utilization, improving people's quality of life, and driving economic development and social progress. Graduates of this program, through practical work experience and ongoing learning, are expected to become exceptional IE Engineers, outstanding IE researchers, and top talents in the field of Industrial Engineering.

二、培养要求 Requirement

1.掌握工业工程的基础理论和专业知识，并能用于解决生产和服务领域的工程问题。

1. The students graduated should master the basic theories and professional knowledge of industrial engineering, and be able to apply them to solve practical problems of industry and service systems.

2.能够综合运用数学、自然科学和工业工程的基础理论，对生产与服务系统进行规划、设计、控制、评价、决策、持续改善与创新。

2. The students graduated should use the basic theories of mathematics, natural sciences and industrial engineering for the planning, design, control, evaluation, decision, improvement and innovation of industrial and service systems

三、学分要求 Credits Requirements

选工业工程专业为辅修专业的学生应修学本专业的 34 学分核心必修课，并符合《西南交通大学本科生辅修与双学位管理办法》规定者，方可颁发本专业辅修证书。

Students minored in industrial engineering should study core compulsory courses of 34 credits in this major, and comply with the Regulations of Southwest Jiaotong University on Minor and Dual Degree Management. Then, they can be issued their minor certificates of industrial engineering.

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
学科基础 7 学分 Discipline Fundamentals 7 Credits	管理学原理 Principles of Management	必修 Compulsory	3	春季 Spring	经管 School of Economics and Management	
	运筹学 A Operations Research A	必修 Compulsory	4	春季 Spring	经管 School of Economics and Management	
专业基础 8 学分 Specialty Fundamentals 8 Credits	系统工程 Systems Engineering	必修 Compulsory	3	秋季 Autumn	运输 School of Transportation and Logistics	
	基础工业工程 Fundament of Industrial Engineering	必修 Compulsory	3	秋季 Autumn	机械 Sch. of Mech. Eng.	
	工程经济学 Engineering Economics	必修 Compulsory	2	春季 Spring	机械 Sch. of Mech. Eng.	
专业课程 19 学分 Specialized Courses 19 Credits	生产计划与控制 Production Planning and Control	必修 Compulsory	3	秋季 Autumn	机械 Sch. of Mech. Eng.	
	人因工程 Human Factors Engineering	必修 Compulsory	4	春季 Spring	机械 Sch. of Mech. Eng.	

	物流分析与设施规划 Logistics Analysis and Facility Planning	必修 Compulsory	3	秋季 Autumn	机械 Sch. of Mech. Eng.	
	质量管理与可靠性 Quality Management and Reliability	必修 Compulsory	3	秋季 Autumn	机械 Sch. of Mech. Eng.	
	供应链管理 A Supply Chain Management A	必修 Compulsory	3	春季 Spring	机械 Sch. of Mech. Eng.	
	系统建模与仿真 System Modeling and Simulation	必修 Compulsory	3	秋季 Autumn	机械 Sch. of Mech. Eng.	
总学分 Total Credits			34			