

上海交通大学研究生课程开设申请表

New Graduate Course Application Form, SJTU

| 课程基本信息 Basic Information | | | | |
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| *课程名称 Course Name | (中文 Chinese) 工程管理 | | | |
| | (英文 English) Engineering Management | | | |
| *学分 Credits | 2 | *学时 Teaching Hours | 32 (1 学分≥16 课时) | |
| *开课学期 Semester | 春季学期 Spring | *是否跨学期 Cross-semester? | 否 No | 跨 Spanning over 个学期 Semesters (含夏季学期)。 |
| *课程性质 Course Category | 专业课 Specialized Course | *课程分类 Course Type | 全日制课程 For full-time students | |
| *授课语言 Instruction Language | 中文 Chinese | 主要授课方式 Teaching Method | 课堂教学 In class teaching | |
| *成绩类型 Grade | 等第制 Letter grading | 主要考核方式 Exam Method | 论文 Essay | |
| *开课院系 School | 材料学院 | | | |
| 所属学科 Subject | | | | |
| 负责教师 Person in charge | 姓名 Name | 工号 ID | 单位 School | 联系方式 E-mail |
| | 何树先 | 60589 | 材料学院 | 13918298919 |
| 课程扩展信息 Extended Information | | | | |
| *课程简介 (中文) Course Description | <p>(分段概述课程定位、教学目标、主要内容、先修课程等；不少于 200 字。)</p> <p>1、课程定位：本课程是工程专业学位研究生专业课程，通过本课程的学习，使研究生对工程管理有比较系统全面的理解，对工程管理的理论和方法有总体把握，为后续相关学习和研究奠定坚实的基础。</p> <p>2、教学目标：通过本课程的教与学，使工程专业研究生熟悉工程管理的总体框架，具体包括对工程和工程管理有基本的认知，熟悉相关工程管理理论和方法，建立工程管理系统性结构化思维，达到提升提出问题、分析问题和解决问题的专业能力。</p> <p>3、主要内容：</p> <p>(1) 第一章：工程管理概论：工程和工程管理概念、工程特性、分类、作用、影响以及历史发展等介绍。</p> <p>(2) 第二章：工程组织与团队：组织的构成，组织的职能，不同类型组织结构的优劣。团队发展的四个阶段及不同阶段所需不同的领导风格；工程项目经理的职责及素质、能力要求。</p> <p>(3) 第三章：工程范围管理：主要包括工程范围的定义，范围管理的主要过程，需求的获取，WBS 工作分解结构技术，范围变更控制。</p> <p>(4) 第四章：工程进度管理：主要包括规划工程进度管理，活动分解与界定，工程活动排序，工程活动工期估算，工程工期计划制定，工程工期计划控制等</p> <p>(5) 第五章：工程成本管理：主要包括规划成本管理，估算成本，制定预算，成本挣值分析，成本控制等。</p> <p>(6) 第六章：工程质量管理：主要包括规划质量管理、管理质量和控制质量。</p> <p>(7) 第七章：资源管理：主要包括规划资源管理，工程团队的组建、建设和管理，各种激励理论，资源的控制等。沟通管理：主要包括规划沟通管理，沟通方法和技巧，监督沟通等。</p> <p>(8) 第八章：工程风险管理：主要包括规划工程风险管理，工程风险的识别，工程风险的分析，工程风险的应对，工程风险的控制等。</p> | | | |

| | <p>(9) 第九章：工程相关方管理：主要包括规划相关方管理、识别相关方、管理相关方、监督相关方等。工程管理总结及案例分析讨论。</p> <p>4、先修课程：无</p> | | | | | | | | | | | | | | | |
|---|---|-----------------------|-------------------------|--|---------------|-----------------|-----------------------|-------------------------|---|--|---|------|---|---|---|------|
| <p>*课程简介 (English) Course Description</p> | <p>(须与中文一致，翻译请力求信达雅。)</p> <p>1. Course Orientation: this course is a professional course for graduate students majoring in engineering. Through the study of this course, the graduate students will have a systematic and comprehensive understanding of engineering management and an overall grasp of the theory and methods of engineering management, for the follow-up study and research to lay a solid foundation.</p> <p>2. Teaching objectives: through the teaching and learning of this course, the graduate students of engineering major will be familiar with the overall framework of engineering management, including the basic knowledge of engineering and engineering management, familiar with the relevant engineering management theory and methods, establish systematic and structural thinking in project management to improve the professional ability of raising, analyzing and solving problems.</p> <p>3. Main Content: Chapter 1: Introduction to engineering management: Engineering and Engineering Management Concepts, engineering characteristics, classification, role, impact and historical development. Chapter 2: Engineering organization and team: the Constitution of organization, the function of organization, the advantages and disadvantages of different types of organization structure. The four stages of team development and different stages of the need for different leadership styles; engineering project manager's responsibilities and quality, ability requirements. Chapter 3: Engineering scope management: including the definition of project scope, the main process of scope management, requirements acquisition, WBS (work breakdown structure) technology, scope change control. Chapter 4: Engineering Schedule Management: It mainly includes planning project schedule management, activity decomposition and definition, activity sequencing, project activity duration estimation, project duration planning, project duration planning control, etc. Chapter 5: Engineering cost management: it mainly includes planning cost management, estimating cost, making budget, cost earned value analysis, cost control and so on. Chapter 6: Engineering quality management: mainly including planning quality management, management quality and control quality. Chapter 7: Engineering resource management: it mainly includes planning resource management, construction and management of engineering team, all kinds of incentive theory, resource control and so on. Communication Management: Including Planning Communication Management, communication methods and skills, supervise communication Chapter 8: Engineering Risk Management: Including Planning Risk Management, risk identification, risk analysis, risk response, and risk control. Chapter 9: Engineering related party management: mainly includes planning related party management, identifying related party, managing related party, supervising related party and so on. Project management summary and case analysis discussion.</p> <p>4. Prerequisite course: No</p> | | | | | | | | | | | | | | | |
| <p>*教学大纲 (中文) Syllabus</p> | <p>(建议列表形式，各列内容：章节、主要内容、课时数、教学方式)</p> <table border="1" data-bbox="379 1809 1471 2096"> <thead> <tr> <th data-bbox="379 1809 517 1883">章节 Chapter</th> <th data-bbox="517 1809 1027 1883">教学内容 Content</th> <th data-bbox="1027 1809 1235 1883">课学数 Teaching Hours</th> <th data-bbox="1235 1809 1471 1883">教学方式 Teaching Method</th> </tr> </thead> <tbody> <tr> <td data-bbox="379 1883 517 1991">1</td> <td data-bbox="517 1883 1027 1991">工程管理概论：工程和工程管理概念、工程特性、分类、作用、影响以及历史发展等介绍。</td> <td data-bbox="1027 1883 1235 1991">4</td> <td data-bbox="1235 1883 1471 1991">课堂教学</td> </tr> <tr> <td data-bbox="379 1991 517 2096">2</td> <td data-bbox="517 1991 1027 2096">工程组织与团队：组织的构成，组织的职能，不同类型组织结构的优劣。团队发展的四个阶段及不同阶段所需不同的</td> <td data-bbox="1027 1991 1235 2096">3</td> <td data-bbox="1235 1991 1471 2096">课堂教学</td> </tr> </tbody> </table> | | | | 章节 Chapter | 教学内容 Content | 课学数 Teaching Hours | 教学方式 Teaching Method | 1 | 工程管理概论：工程和工程管理概念、工程特性、分类、作用、影响以及历史发展等介绍。 | 4 | 课堂教学 | 2 | 工程组织与团队：组织的构成，组织的职能，不同类型组织结构的优劣。团队发展的四个阶段及不同阶段所需不同的 | 3 | 课堂教学 |
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| 1 | 工程管理概论：工程和工程管理概念、工程特性、分类、作用、影响以及历史发展等介绍。 | 4 | 课堂教学 | | | | | | | | | | | | | |
| 2 | 工程组织与团队：组织的构成，组织的职能，不同类型组织结构的优劣。团队发展的四个阶段及不同阶段所需不同的 | 3 | 课堂教学 | | | | | | | | | | | | | |

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| | | breakdown structure) technology, scope change control. | | |
| | 4 | Engineering Schedule Management: It mainly includes planning project schedule management, activity decomposition and definition, activity sequencing, project activity duration estimation, project duration planning, project duration planning control, etc. | 4 | In class teaching |
| | 5 | Engineering cost management: it mainly includes planning cost management, estimating cost, making budget, cost earned value analysis, cost control and so on. | 3 | In class teaching |
| | 6 | Engineering quality management: mainly including planning quality management, management quality and control quality. | 3 | In class teaching |
| | 7 | Engineering resource management: it mainly includes planning resource management, construction and management of engineering team, all kinds of incentive theory, resource control and so on. Communication Management: Including Planning Communication Management, communication methods and skills, supervise communication | 4 | In class teaching |
| | 8 | Engineering Risk Management: Including Planning Risk Management, risk identification, risk analysis, risk response, and risk control. | 4 | In class teaching |
| | 9 | Engineering related party management: mainly includes planning related party management, identifying related party, managing related party, supervising related party and so on. Project management summary and case analysis discussion. | 4 | In class teaching |
| | | | | |
| *课程要求 (中文) Requirements | <p>(课程考核方式、考核标准等; 不少于 50 字)</p> <p>1、考核方式: 对学生的知识结构、能力、素质等进行过程考核和综合考核。加强学习过程的考核, 如课堂讨论、课后作业、小测试、大论文等。依据培养目标及课程目标合理分配过程考核与期末考核的比重。</p> <p>2、考核标准: 重点考核学生运用所学基本知识和技能解决实际问题的能力和水平。考核工程管理基本的发现问题、分析问题和解决问题的系统性结构化的思维能力。考核对工程管理科研和创新方法的掌握程度。</p> | | | |
| *课程要求 (English) Requirements | <p>(须与中文一致, 翻译请力求信达雅。)</p> <p>1. Assessment Method: Process Assessment and comprehensive assessment of students' knowledge structure, ability and quality. Strengthen the assessment of the learning process, such as class discussion, after-school assignments, test, and term papers and so on. According to the training objectives and curriculum objectives, reasonable allocation of process assessment and final assessment of the proportion.</p> <p>2. Examination standard: the ability and the level of student using the basic knowledge and the skill to solve the actual question will be examined firstly. Evaluate the ability of systematic and structured thinking to discover, analyze and solve problems in engineering management. Examine the degree of mastery of scientific research and innovative methods in engineering management.</p> | | | |
| *课程资源 (中文) Resources | <p>(教材、教参、网站资料等。)</p> <p>【1】何继善等著: 工程管理理论【M】: 北京: 中国建筑工业出版社, 2017</p> <p>【2】成虎、宁延等著: 工程管理导论【M】: 北京: 机械工业出版社, 2018</p> <p>【3】中国工程院: 构建工程管理理论体系【M】: 北京: 高等教育出版社, 2015</p> | | | |

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| <p>*课程资源 (English) Resources</p> | <p>(须与中文一致, 请力求信达雅。)</p> <p>[1] <u>He Jishan, et al. . Engineering management theory [M] ;Beijing: China Construction Industry Press, 2017</u></p> <p>[2] <u>Cheng Hu, Ning Yan, et al. . Introduction to engineering management [M] ; Beijing: China Machine Press, 2018</u></p> <p>[3] <u>Chinese Academy of Engineering: the construction of a theoretical system of engineering management [M] ; Beijing: Higher Education Press, 2015</u></p> |
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