

课程详述

COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	课程名称 Course Title	毕业设计（论文） Graduation Project (Thesis)				
2.	授课院系 Originating Department	材料科学与工程系 Department of Materials Science and Engineering				
3.	课程编号 Course Code	MSE490				
4.	课程学分 Credit Value	8				
5.	课程类别 Course Type	专业基础课 Major Foundational Course				
6.	授课学期 Semester	春季 Spring				
7.	授课语言 Teaching Language	中英双语 English & Chinese				
8.	授课教师、所属学系、联系方式（如属团队授课，请列明其他授课教师） Instructor(s), Affiliation & Contact (For team teaching, please list all instructors)	田颜清，材料科学与工程系，电子邮箱：tianyq@sustc.edu.cn 叶飞，材料科学与工程系，电子邮箱：yef3@sustc.edu.cn Yanqing Tian, Department of MSE, Email: tianyq@sustc.edu.cn Fei Ye, Department of MSE, Email: yef3@sustc.edu.cn////				
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	无 NA				
10.	选课人数限额(可不填) Maximum Enrolment (Optional)	无 NA				
11.	授课方式 Delivery Method	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other (Please specify)	总学时 Total
	学时数 Credit Hours			256		256

12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	无 NA
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	无 NA
14. 其它要求修读本课程的学系 Cross-listing Dept.	无 NA

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

毕业设计（论文）是大学生培养的最后—个教学环节，是学生在在校期间—次系统的综合训练。通过毕业设计（论文），可以综合训练和全面提高学生综合学习能力，更加深入掌握本专业理论知识、实验方法和仪器使用，培养学生分析和总结实验数据的能力，培养学生综合运用所学知识解决复杂工程问题的能力。

Graduation project (thesis) is the last teaching process of undergraduate cultivation, and it is a systematic and comprehensive training for students in university. Through the graduation project (thesis), the comprehensive learning ability can be trained and improved. The students can have a deeper understanding of the theoretical knowledge, experimental methods and the usage of instruments. This course can also cultivate their ability to analyze and summarize experimental data, and cultivate their ability to solve complex engineering problems by comprehensively using the knowledge they have learned.

16. 预达学习成果 Learning Outcomes

1. 掌握调查研究，文献和资料查阅、综合分析的能力。
 2. 掌握外文文献阅读能力，计算机和专业软件应用能力。
 3. 掌握方案论证，分析比较的能力。
 4. 掌握设计、计算、绘图与标准规范的正确选择能力。
 5. 具有本专业常用实验方法、设备应用，以及实验数据的获取及分析处理能力。
 6. 具有与科研团队沟通和协调能力。
 7. 具有撰写设计说明书或论文报告的能力。
 8. 具有语言表达、思辨能力，阐述观点准确、清楚回答问题的能力。
 9. 能够合理准确分析针对工程问题提出的解决方案对社会、环境、法律等相关因素的影响。
1. To master the ability of investigation, literature survey and comprehensive analysis.
 2. To master the ability of reading foreign literature, computer and professional software application.
 3. To master the ability of program demonstration, analysis and comparison.
 4. To master the ability of correct selection of design, calculation, drawing and standard specification.
 5. To grasp common experimental methods, equipment applications, and the ability to obtain and analyze experimental data.
 6. To grasp the skill of communicating and cooperating with the scientific research team.
 7. To grasp the skill of writing design specifications or thesis reports.
 8. To grasp the ability of language expression, critical thinking, accurate point of view, and clear answer to questions.
 9. To reasonably and accurately analyze the impact of solutions to engineering problems on social, environmental, legal and other related factors.

17. 课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）

Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)

1. 毕业设计（论文）选题和审题（在四年级秋季学期结束前完成）
 2. 开题（2周）
 3. 毕业设计（论文）工作开展（10周）
 4. 毕业设计（论文）撰写（3周）
 5. 答辩（1周）
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1. Graduation project (thesis) topic selection and examination (to be completed before the end of the fall semester of the fourth grade)
 2. Proposal (2 weeks)
 3. Graduation project (thesis) implementation (10 weeks)
 4. Graduation project (thesis) writing (3 weeks)
 5. Defence (1 week)

18. 教材及其它参考资料 Textbook and Supplementary Readings

无 NA

课程评估 ASSESSMENT				
19. 评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
研究水平 Research Skill		10		
工作表现 Performance		10		
口头报告 Oral Report		60		Consists of PPT quality (20), expression (20), research skill (20)
书面报告 Written Report		20		Consists of thesis quality (10) and data analysis (10)
其它（可根据需要 改写以上评估方式） Others (The above may be modified as necessary)				

20. 记分方式 **GRADING SYSTEM**

- A. 十三级等级制 **Letter Grading**
 B. 二级记分制（通过/不通过） **Pass/Fail Grading**

课程审批 **REVIEW AND APPROVAL**

21. 本课程设置已经过以下责任人/委员会审议通过
This Course has been approved by the following person or committee of authority