

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	材料科学进展 Frontiers Seminars in Materials Science and Engineering				
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	MSE102				
4.	课程学分 Credit Value	1				
5.	课程类别 Course Type	专业选修课 Major Elective 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)	谷猛，材料科学与工程系，电子邮箱：gum@sustc.edu.cn 叶飞，材料科学与工程系，电子邮箱：yef3@sustc.edu.cn Meng Gu, Department of MSE, Email: gum@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	16				16

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

本课程主讲教师由本校材料科学与工程专业在材料学科特定方向上长期从事科学研究的学术带头人或学术骨干担任，主要基于自身材料研究和开发工作，介绍现代先进材料、功能材料、材料及器件加工以及表征技术的研究前沿，材料科学与工程及其相关的学科概况，相关科研领域的前沿进展，从而拓宽学生知识面和视野，了解相关学科的最新进展，培养创新精神和启发科研思路，了解科学研究的一般规律，为未来从事创新性工作奠定基础。

This course organizes lectures gave by professors of materials science and engineering, who are academic leaders or backbones engaged in scientific research on materials science. The lectures mainly based on their own materials research and development work, introduce the frontiers of the modern advanced materials, functional materials, materials and device processing and characterization technique. The development of materials science and engineering and other related field will be overviewed. These lectures will broaden the knowledge and horizons of students cultivate their innovative spirit and inspire research train of thought. They can also help students to understand the general rules of scientific research, and to lay the foundation for future innovative work.

16. 预达学习成果 Learning Outcomes

1. 拓宽学生知识面和视野，了解相关学科的最新进展。
2. 了解材料研究开发和开发过程对环境和社会的影响，以及相关标准、健康、法律等影响因素。
3. 了解科学研究的一般规律，理解材料研究和开发项目管理的基本原则和方法。
4. 培养创新精神和启发科研思路，为未来从事创新性工作奠定基础。

1. To broaden the knowledge and the horizons of students, and to understand the new development of materials science and engineering.
2. To understand the impacts of material research and development on the environment and society, as well as the related standards, health, legal and other influencing factors.
3. To understand the basic rules of principles and methods of material research, development and project management.
4. To cultivate the innovative spirit and inspire research train of thought, and to lay the foundation for future innovative work.

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.)

以双周讲座报告的形式讲述和讨论材料科学与工程各领域的研究进展。共 8 次讲座，每次 2 个报告，每个报告约 1 小时。

Biweekly seminars on topics of development of materials science and engineering.
8 seminars, each seminar have two lectures and 1 hour for each lecture.

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

无 NA

Southern University
of Science and
Technology

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
出勤 Attendance		10		
课堂表现 Class Performance		40		
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments				
期中考试 Mid-Term Test				
期末考试 Final Exam				
期末报告 Final Presentation		50		

其它（可根据需要
改写以上评估方
式）
Others (The
above may be
modified as
necessary)

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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

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