

## 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.	<b>课程名称 Course Title</b>	微电子学创新实验 I Advanced Microelectronics Experiment I
2.	<b>授课院系 Originating Department</b>	深港微电子学院 School of Microelectronics
3.	<b>课程编号 Course Code</b>	SME303
4.	<b>课程学分 Credit Value</b>	1
5.	<b>课程类别 Course Type</b>	专业选修课 Major Elective Courses
6.	<b>授课学期 Semester</b>	秋季 Fall
7.	<b>授课语言 Teaching Language</b>	中英双语 English & Chinese
8.	<b>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 &amp; Contact (For team teaching, please list all instructors)</b>	微电子学院相关老师 (课程协调人, 崔德虎) 崔德虎/ CUI Dehu 深港微电子学院 助理教授, School of Microelectronics, Assistant Professor 第二科研楼 527, Research Building 2, room 527 <a href="mailto:cuidh@sustech.edu.cn">cuidh@sustech.edu.cn</a> , 88018586
9.	<b>实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact</b>	待公布 To be announced
10.	<b>选课人数限额(可不填) Maximum Enrolment (Optional)</b>	

11. 授课方式 Delivery Method	讲授	习题/辅导/讨论	实验/实习	其它(请具体注明)	总学时
	Lectures	Tutorials	Lab/Practical	Other (Please specify)	Total
学时数 Credit Hours			32		32

12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	PHY105B 大学物理(下) B General Physics B (II)
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	
14. 其它要求修读本课程的学系 Cross-listing Dept.	

### 教学大纲及教学日历 SYLLABUS

#### 15. 教学目标 Course Objectives

本课程旨在训练学生实验技能，帮助学生开拓创新思维，掌握思考问题和解决问题的方法，增项团队协作意识。通过本实验操作的学习，学生能够同时熟悉微电子学院各研究方向的特色及研究方向，顺利完成实验并撰写实验报告。并在此基础上参与 Arm、华为、优必选等产业界新工科项目，参加各类新工科开发竞赛。

This program aims at training students' experiment skills, innovative mind-set, problem-solving skills; and strengthening team-work awareness. After completion of this course, students should have a comprehensive understanding about the School of Microelectronics, complete experiments and projects and submit experimental reports. And the students will participate in new engineering projects such as Arm, Huawei, and UBTECH, and participate in various new engineering development competitions.

#### 16. 预达学习成果 Learning Outcomes

通过学生参与教授的科研工作，可以让学生了解最新的科研动态，接触微电子领域世界前沿的科学知识，并掌握先进科研仪器的使用，培养学生的创造性思维以及严谨的科研态度，提升实践能力、创新能力、成为具备国际竞争力的高素质新工科人才。

Through the participation of students in the research work, students can learn about the latest scientific research, contact the world's cutting-edge scientific knowledge in the field of microelectronics, and master the use of advanced scientific research instruments to cultivate students' creative thinking and rigorous research attitudes, the practical and innovative ability will be improved, then become a high-quality new engineering talent with international competitiveness.

#### 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.)**

本课程围绕微电子学的各个研究方向，由课题组老师设计相应的创新实验内容。每学年指定一名总协调老师，由协调老师负责统筹安排本学期实验课程、收集考核成绩。选修此课程的学生需要选择1位我院教授作为其导师，并在其指导下开展实验工作。实验内容将结合新工科项目开发，着重培养学生实践能力、创新能力和国际竞争力。

This course focuses on the four research directions of microelectronics, and the corresponding experimental content is designed by the teachers of each research group. The coordinating teacher will arrange the experimental courses. Students will need to choose one mentor and do experiments under their guidance. The course will combine new engineering project, focus on the students' practical ability, innovative ability, and international competitiveness.

- 1、学生选择创新实验项目，递交课题简介表。（4学时）
  - 2、学生进行创新实验项目(教学第8周递交项目期中审核表)。（24学时）
  - 3、准备创新实验项目口头报告和书面报告，项目导师及监督导师审核项目报告。（4学时）
1. Student chooses research project, and submits project information form. (4hours)
  2. Student participants in chosen research project (submit mid-term project evaluation form at week 8). (24hours)
  3. Student prepares oral presentation and project written report, and research instructor evaluates project report. (4hours)

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

无 N/A

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				
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments				
期中报告 Mid-Term Test		20		项目指导老师出具期末考核成绩。 Project oral presentation and written report
期末考试 Final Exam				
期末报告 Final Presentation		60		项目指导老师出具期末考核成绩。 Project oral presentation and written report

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

	20		考核监督人出具期末考核成绩： 20% Project evaluation by project modulator at final-term: 20%
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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**

