

## 课程大纲

### COURSE SYLLABUS

1.	<b>课程代码/名称</b> <b>Course Code/Title</b>	微电子研究及应用报告 Seminar on Microelectronics Research & Applications
2.	<b>课程性质</b> <b>Compulsory/Elective</b>	专业选修课 Major Elective Courses
3.	<b>课程学分/学时</b> <b>Course Credit/Hours</b>	1/16
4.	<b>授课语言</b> <b>Teaching Language</b>	英 中 English & Chinese
5.	<b>授课教师</b> <b>Instructor(s)</b>	张国飙 Zhang Guobiao
6.	<b>先修要求</b> <b>Pre-requisites</b>	无 NA
7.	<b>教学目标</b> <b>Course Objectives</b>	<p>本课程旨在培养学生了解微电子领域科技发展的热点及方向，使学生充分充分交流研究课题，启发思想与提升科研能力。本课程拟以专题形式开展学生研究进展讲座，最终使学生对微电子领域研究热点有深刻的理解和认识，提高文献查阅和文献综述的能力。</p> <p>This course is designed to provide undergraduates a platform to share the latest hotspots of their research on technology development in the field of microelectronics, and communication inspires their interest and research capabilities in microelectronics. This course is intended to invite students to make research progress reports within several research topic, and ultimately let the students have a deep understanding of the hotspots and improve the ability to read literature and writing review articles.</p>
8.	<b>教学方法</b> <b>Teaching Methods</b>	讲座 Lectures
9.	<b>教学内容</b> <b>Course Contents</b>	<p><b>Section 1</b></p> <p>国际微电子方向的研究进展、应用案例汇报等。涵盖集成电路工艺器件（CMOS、新型超高密度存储器、GaN 器件与系统集成）、IC 设计（人工智能芯片、太赫兹通讯芯片、DNA 传感器芯片）、微型能量采集器（微型能量采集器、微型湿度传感器、半导体测试探针、MEMS 加工工艺开发）等研究方向。</p> <p>The content of this course is about the research progress, application analyses reports.</p> <p>The lecture covers integrated circuit process devices (CMOS, new ultra-high density memory, GaN devices and system integration, etc.), IC design (artificial intelligence chip, terahertz communication chip, DNA sensor chip, etc.), micro energy harvester (micro energy harvester, micro humidity sensors, semiconductor test probes, and MEMS processing technology development etc.</p> <p><b>Section 2</b></p> <p>授课，确定研究课题，进行学生研究进展汇报，师生交流</p> <p>lectures, classify research topics, and conducting student research progress reports, communication between lectures and audience</p> <p><b>Section 3</b></p>

	<b>Section 4</b>	
	<b>Section 5</b>	
	<b>Section 6</b>	
	<b>Section 7</b>	
	<b>Section 8</b>	
	<b>Section 9</b>	
	<b>Section 10</b>	
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<b>10.</b>	<b>课程考核 Course Assessment</b>	
	请再此注明：①考查/考试；②分数构成。 考查 Evaluation 出勤 Attendance 10% 期末报告 Final Presentation 90%	
<b>11.</b>	<b>教材及其它参考资料 Textbook and Supplementary Readings</b>	