

# 國立中興大學教學大綱

<b>課程名稱 (course name)</b>	(中) 極大型積體電路技術				
	(Eng.) Very Large Scale Integrated Circuit Technology				
<b>開課系所班級 (dept. &amp; year)</b>	物理系(奈米電子與光電能源)中研碩士在職專班	<b>學分 (credits)</b>	3	<b>授課教師 (teacher)</b>	
<b>課程類別 (course type)</b>	<input type="checkbox"/> 必修 <input checked="" type="checkbox"/> 選修	<b>授課語言 (language)</b>	中	<b>開課學期 (semester)</b>	
<b>課程目標 (course objectives)</b>	(中)介紹近代積體電路製作的技術與原理。				
	(Eng.) Introduce the technologies and principles of modern integrated circuit manufacture processes.				
<b>課程簡述 (course description)</b>	(中) 介紹近代積體電路製作的技術與原理				
	(Eng.)This course is to introduce the technologies and principles of modern integrated circuit manufacture processes.				
<b>先修課程(prerequisites)</b>					
<b>課程名稱 (course name)</b>		與課程銜接的重要概念、原理與技能 (relation to the current course)			
<b>教學模式 (teaching methodology) 【請勾選】</b>	<b>講授 (teaching)</b>	<b>討論/報告 (discussion &amp; report)</b>	<b>實驗/參訪 (exp./fab visit)</b>	<b>遠距/網路教學 (remote/web teaching)</b>	
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授課內容 (單元名稱與內容、習作/考試進度、備註)

**(course content and homework/tests schedule)**

1. Introduction to the Semiconductor Industry
2. Characteristics of Semiconductor Materials
3. Device Technologies
4. IC Fabrication Process Overview
5. Oxidation and Metallization
6. Photolithography
7. Etch and Ion Implantation
8. Chemical Mechanical Planarization
9. Wafer Test, Assembly and Packaging

學習評量方式

**(evaluation)**

考試及報告

教科書&參考書目 (書名、作者、書局、代理商、說明)

**(textbook & other references)**

**Semiconductor Manufacturing Technology**, by M. Quirk & J. Serda. (2001)

課程教材 (教師個人網址請列在本校內之網址)

**(teaching aids & teacher's website)**

課程輔導時間

**(office hours)**