

南臺科技大學 104 學年度第 1 學期課程資訊

課程名稱	電子學(一)
課程編碼	30D10305
系所代碼	03
開課班級	四技微電二甲
開課教師	楊汎緯
學分	3.0
時數	3
上課節次地點	二 7 8 9 教室 J004
必選修	必修
課程概述	<ul style="list-style-type: none"> ●Semiconductor Materials and Diodes ●Diode Circuits ●The Bipolar Junction Transistor ●Basic Bjt Amplifiers
課程目標	<p>The purpose of the course is to provide a foundation for analyzing and designing both analog and digital electronic circuits.</p> <p>The majority of electronic circuits today are designed as integrated circuits (ICs), in which the entire circuit is fabricated on a single piece of semiconductor material. The ultimate objective is to understand the operation, characteristics, and limitations of these integrated circuits.</p>
課程大綱	<ul style="list-style-type: none"> ●半導體材料和二極體.. ●二極體電路. ●雙極接面電晶體. ●基本雙極電晶放大器.
英文大綱	<ul style="list-style-type: none"> ●Semiconductor Materials and Diodes <ol style="list-style-type: none"> 1.Semiconductor Materials and Properties 2.The pn Junction 3.Diode Circuits:DC Analysis and Models 4.Diode Circuits:AC Equivalent Circuit 5.Other Diode Type ●Diode Circuits <ol style="list-style-type: none"> 1.Rectifier Circuits 2.Zener Diode Circuits 3.Clipper and Clamper Circuits 4.Multiple-Diode Circuits 5.Photodiode and LED Circuits

	<ul style="list-style-type: none"> ●The Bipolar Junction Transistor <ol style="list-style-type: none"> 1.Basic Bipolar Junction Transistor 2.DC Analysis of Transistor Circuits 3.Basic Transistor Circuits 4.Bipolar Transistor Biasing 5.Multistage Circuits ●Basic Bjt Amplifiers <ol style="list-style-type: none"> 1.Analog Signals and Linear Amplifiers 2.The Bipolar Linear Amplifier 3.Basic Transistor Amplifier Configurations 4.Common-Emitter Amplifiers 5.AC Load Line Analysis 6.Common-Coilector (Emitter-Follower) Amplifiers 7.Common-Base Amplifiers 8.The Three Basic Amplifiers:Summary and Comparison 9.Multistage Amplifiers 10.Power Considerations
教學方式	
評量方法	
指定用書	Microelectronics: Circuit Analysis and Design
參考書籍	翻譯：陳筱青、楊逢頡、謝瑞航 微電子學(上冊)滄海書局 2011年5月
先修科目	
教學資源	
注意事項	
全程外語授課	0
授課語言 1	華語
授課語言 2	
輔導考照 1	
輔導考照 2	