

# 南台科技大學 102 學年度第 2 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	王國隆
學分	3.0
時數	3
上課節次地點	二 1 8 9 教室 I303
必選修	必修
課程概述	<ul style="list-style-type: none"> <li>●Semiconductor Materials and Diodes</li> <li>●Diode Circuits</li> <li>●The Bipolar Junction Transistor</li> <li>●Basic Bjt Amplifiers</li> </ul>
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"> <li>●半導體材料和二極體..</li> <li>●二極體電路.</li> <li>●雙極接面電晶體.</li> <li>●基本雙極電晶放大器.</li> </ul>
英文大綱	<ul style="list-style-type: none"> <li>●Semiconductor Materials and Diodes             <ol style="list-style-type: none"> <li>1.Semiconductor Materials and Properties</li> <li>2.The pn Junction</li> <li>3.Diode Circuits:DC Analysis and Models</li> <li>4.Diode Circuits:AC Equivalent Circuit</li> <li>5.Other Diode Type</li> </ol> </li> <li>●Diode Circuits             <ol style="list-style-type: none"> <li>1.Rectifier Circuits</li> <li>2.Zener Diode Circuits</li> <li>3.Clipper and Clamper Circuits</li> <li>4.Multiple-Diode Circuits</li> <li>5.Photodiode and LED Circuits</li> </ol> </li> </ul>

	<ul style="list-style-type: none"> <li>●The Bipolar Junction Transistor <ul style="list-style-type: none"> <li>1.Basic Bipolar Junction Transistor</li> <li>2.DC Analysis of Transistor Circuits</li> <li>3.Basic Transistor Circuits</li> <li>4.Bipolar Transistor Biasing</li> <li>5.Multistage Circuits</li> </ul> </li> <li>●Basic Bjt Amplifiers <ul style="list-style-type: none"> <li>1.Analog Signals and Linear Amplifiers</li> <li>2.The Bipolar Linear Amplifier</li> <li>3.Basic Transistor Amplifier Configurations</li> <li>4.Common-Emitter Amplifiers</li> <li>5.AC Load Line Analysis</li> <li>6.Common-Coilector (Emitter-Follower) Amplifiers</li> <li>7.Common-Base Amplifiers</li> <li>8.The Three Basic Amplifiers:Summary and Comparison</li> <li>9.Multistage Amplifiers</li> <li>10.Power Considerations</li> </ul> </li> </ul>
教學方式	
評量方法	
指定用書	微電子學 (上)冊 第四版
參考書籍	Microelectronic circuits Sedra / Smith
先修科目	
教學資源	
注意事項	上課自行攜帶作業簿 (二十六孔活頁紙)
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	