

南台科技大學 103 學年度第 1 學期課程資訊

| | |
|--------|--|
| 課程名稱 | 電子學(一) |
| 課程編碼 | 30D10303 |
| 系所代碼 | 03 |
| 開課班級 | 四技系統二甲 |
| 開課教師 | 鄭建民 |
| 學分 | 3.0 |
| 時數 | 3 |
| 上課節次地點 | 二 5 6 五 1 教室 I201 |
| 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 | 微電子學 |
| 參考書籍 | |
| 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 | |