

南台科技大學 98 學年度第 2 期課程資訊

課程名稱	醫療儀器系統設計
課程編碼	20M05801
系所代碼	02
開課班級	博研電機一甲 碩研電機一甲 海研電機一甲 碩研生醫一甲
開課教師	黃基哲
學分	3.0
時數	3
上課節次地點	四 2 3 4 教室 A302
必選修	選修
課程概述	The course describes the principles, applications and design of the medical instruments in hospital. It is directed against these fundamental principles of operation and general types of equipment.
課程目標	It is for senior to graduate -level course in biomedical engineering. These fundamental principles of operation and general types of equipments are understudied for students via the course. And they know that applications and design of the medical instruments in hospital. Base on the knowledge, the students can design the biomedical instrument system.
課程大綱	<ol style="list-style-type: none"> 1.醫療儀器之基本原理 2.基本感測器與其理論 3.放大器與訊號處理 4.生物電訊號之來源 5.生物電訊號之電極 6.生物電訊號之放大器 7.血壓與聲音 8.血流與血體積的量測 9.生醫影像系統 10.電安全
英文大綱	<ol style="list-style-type: none"> 1.Basic concepts of medical instrumentation 2.Basic sensors and principles 3.Amplifiers and signal processing 4.The origin of biopotentials 5.Biopotential electrodes 6.Biopotential amplifiers 7.Blood pressure and sound 8.Measurement of flow and volume of blood 9.Medical imaging system

	10.Electrical safety
教學方式	課堂教授,分組討論,口頭報告,實務操作,
評量方法	自行設計測驗,作業／習題練習,實作評量,口頭報告,課堂討論,課程參與度(出席率),
指定用書	Medical Instrumentation Application and Design”, 4th edition
參考書籍	Joseph J. Carr and John M. Brown "Introduction to Biomedical Equipment Technology" 4th Ed. Prentice-Hall,Inc, 2001
先修科目	
教學資源	網路教學(Blackboard)
注意事項	有實習與實作之課程，分別以實習單元與小專題方式進行
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	