南台科技大學 99 學年度第 1 學期課程資訊

課程名稱	最佳化控制
課程編碼	10M05201
系所代碼	01
開課班級	博研機電一甲　碩研機械一甲　碩研能源一甲　碩研機電一甲　碩研奈米一甲
開課教師	黃東雍
學分	3.0
時數	3
上課節次地點	三 1 2 3　教室 K007
必選修	選修
課程概述	It offers as self-contained a presentation as possible and, for reference sake, includes many background results on linear systems, the theory and application of Riccati equations and model reduction.
課程目標	This course provides a comprehensive but accessible treatment of "optimal control systems" with just the right degree of mathematical rigor to be complete but practical. It provides a solid bridge between "traditional" optimization using the calculus of variations and what is called "modern" optimal control.
課程大綱	1. 線性代數 2. 線性動態系統 3. Riccati 代數方程式 4. 性能規格 5. H2 最佳化控制 6. 線性平方最佳化
英文大綱	1. Linear algebra 2. Linear dynamical systems 3. Algebraic Riccati equations 4. Performance specifications 5. H2 Optimal control 6. Linear quadratic optimization
教學方式	課堂教授,
評量方法	自行設計測驗,作業／習題練習,課堂討論,
指定用書	Robust and optimal control
參考書籍	1. Naidu, D.S., Optimal Control Systems, CRC Press, 2003. 2. Donald E. Kirk, Optimal Control Theory: An Introduction, Dover Publications, 2004. 3. Frank L. Lewis, Vassilis L. Syrmos, Optimal Control, 2nd Ed., Wiley, 1995.
先修科目	Engineering Mathematics

教學資源	projector
注意事項	
全程外語授課	1
授課語言 1	英語
授課語言 2	
輔導考照 1	
輔導考照 2	

教學資源　projector