

課程資訊 及 課程大綱

課程名稱 (中文)	Linux 作業系統核心
課程名稱 (英文)	Linux Operation System Kernel
科號	11220IIS 500500
授課教師	張君天
上課時間	M567
開課年級	
學分數	3
人數限制	30
先修科目	
課程簡述 Brief Course Description (required)	透過探討 Linux 核心內部設計，並配合程式碼閱讀與撰寫，了解系統核心的運作方式，進而對系統核心進行改善或強化其功能與安全性。
關鍵字	Linux,Kernel, Architectur, Operating system,核心,架構,作業系統
課程大綱 Detailed Course Syllabus	<p>一、課程說明(Course Description) 本課程將針對 Linux Kernel 進行分析介紹，並搭配程式實作方式進行，透過開發、修改、追蹤、除錯 Linux kernel 來做深入之探討。</p> <p>二、指定用書(Text Books) Title: Linux Kernel Development (3rd Edition) Author: Robert Love Publisher: Addison-Wesley Professional ISBN 978-0672329463</p> <p>三、參考書籍(References) Title: Linux Device Drivers, 3rd Edition Authors: Jonathan Corbet, Alessandro Rubini & Greg Kroah-Hartman Publisher: O'Reilly ISBN 0-596-00590-3</p> <p>四、教學方式(Teaching Method) 課堂講解、實機操作</p> <p>五、教學進度(Syllabus) Chapter 1: An Introduction to Device Drivers</p>

Chapter 2: Building and Running Modules
Chapter 3: Char Drivers
Chapter 4: Debugging Techniques
Chapter 5: Concurrency and Race Conditions
Chapter 6: Advanced Char Driver Operations
Chapter 7: Time, Delays, and Deferred Work
Chapter 8: Allocating Memory
Chapter 9: Communicating with Hardware
Chapter 10: Interrupt Handling
Chapter 11: Data Types in the Kernel
Chapter 12: PCI Drivers
Chapter 13: USB Drivers
Chapter 14: The Linux Device Model
Chapter 15: Memory Mapping and DMA
Chapter 16: Block Drivers
Chapter 17: Network Drivers
Chapter 18: TTY Drivers

六、成績考核(Evaluation)

作業 60%

考試 40%

七、可連結之網頁位址 相關網頁(Personal Website)