※為保護智慧財產權，請勿非法影印教科書。

課程學分數：3.00(3.00小時)

授課老師：吳卓俊(227006)　　　　　　　　　　　　　　　　必選修：選

開課序號	1144
科目名稱	高等作業系統(BFBZ008)
科目英文名稱	Advanced Operating System
授課語言	英語/全外語授課
主要教學型態	課堂教學
教學目標	This course focuses on selected advanced topics of operating systems, such as CPU and memory virtualization. It also covers the implementation issues of modern operating systems. Note: The courses in the last 2 weeks (i.e., week 17-18) will be adjusted to the previous weeks (i.e., form week 2 to 16).
每週課程內容及教學方法	Week 1: (lecture and discussion): Introduction Week 2: (lecture and discussion): Processes Week 3: (lecture and discussion): Process API Week 4: (lecture and discussion): Direct Execution Week 5: (lecture and discussion): CPU Scheduling Week 6: (lecture and discussion): Multi-Level Feedback Queue Week 7: (lecture and discussion): Lottery Scheduling Week 8: (lecture and discussion): Address Spaces and Memory API Week 9: midterm Week 10: (lecture and discussion): Base and Bound Week 11: (lecture and discussion): Segmentation Week 12: (lecture and discussion): Free Space Management Week 13: (lecture and discussion): Paging Week 14: (lecture and discussion): Translation Lookaside Buffer Week 15: (lecture and discussion): Advanced Page Tables Week 16: (lecture and discussion): Swapping Mechanisms Week 17: (lecture and discussion): Swapping Policies Week 18: final exam Note: The courses in the last 2 weeks (i.e., week 17-18) will be adjusted to the previous weeks (i.e., form week 2 to 16).
核心能力	
預期學習成果	1. Students will be able to apply knowledge of operating systems. 2. Students will be able to evaluate the performance of operating systems. 3. Students will be able to design a "shell" for Linux operating systems.

與預期學習成果 搭配的多元評量	Participation in class discussion (10 bonus marks) 5 assignments (30%) Mid-term Exam (20%) Final Exam (20%) Project (30%)
主要讀本	Operating Systems: Three Easy Pieces (Available Online)
參考書目	Selected papers in related research topics.
其他事項	