

# Unix Operating System

## Unix 作業系統

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# Introduction

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# Introduction

- Unix is a popular Operating System in Engineering and business world.
- The course is mainly practically oriented. The students will learn:
  - Fundamental knowledge of Unix
  - Basic system administrator.
  - Know how to use Unix native tools as well as to write shell scripts
  - Develop tools using Unix system call library

# Text book and references

- Text book:
  - Sumitabha Das, YOUR UNIX The Ultimate Guide, 2<sup>nd</sup> edition, McGraw Hill
- Reference books:
  - UNIX SHELLS by Example, Ellie Quigley
  - O'Reilly, Unix Power Tools.
  - SUSE Linux User Guide (pdf)
  - SUSE Linux Administrator's Guide (pdf)
  - BASH Guide for Beginner (pdf)
  - Advanced BASH-Scripting Guide (pdf)
  - BASH Guide for beginners (pdf)
  - Linux Network Administration Guide (pdf)
  - Linux From Scratch (pdf)

# Grading

- 評分標準：
  - 期中考 25%
  - 小考,作業及程式 25%
  - 實習 25%
  - 期末考 25%

# Topics

- Unix Introduction
- Familiar with UNIX commands
- Unix file system
- Managing Process
- Networking tools
- Shell scripts and Regular expression
  - awk, sed, grep, etc.
- Software development tools:
  - Compiler gcc
  - gmake or make
  - ar building library archive
  - RCS Version control system
  - DDD and dbx debugger (How to debug your application program)
  - emacs, vi, pico, editor

# Topics – continue...

- Understand Disk partition
- Installing Linux
- User management
- Mounting and un-mounting file systems
- Managing disk space
- Backing up and restoring files
- Maintaining security