OPERATING SYSTEMS

Presentation of the teaching unit

Who I am

About myself

- **Giorgio Giacinto**
  - Full Professor of computer engineering
  - http://people.unica.it/giorgiogiacinto
  - email: giacinto@unica.it
  - Tel. 070675 5752
  - Office: 3rd floor - Bd. M - Dept. Electrical and Electronic Eng.

- Research topics
  - Malware analysis and detection
  - Machine Learning for Cybersecurity
  - Threat intelligence

- Co-founder of the University spin-off

Learning objectives, contents, and teaching organization
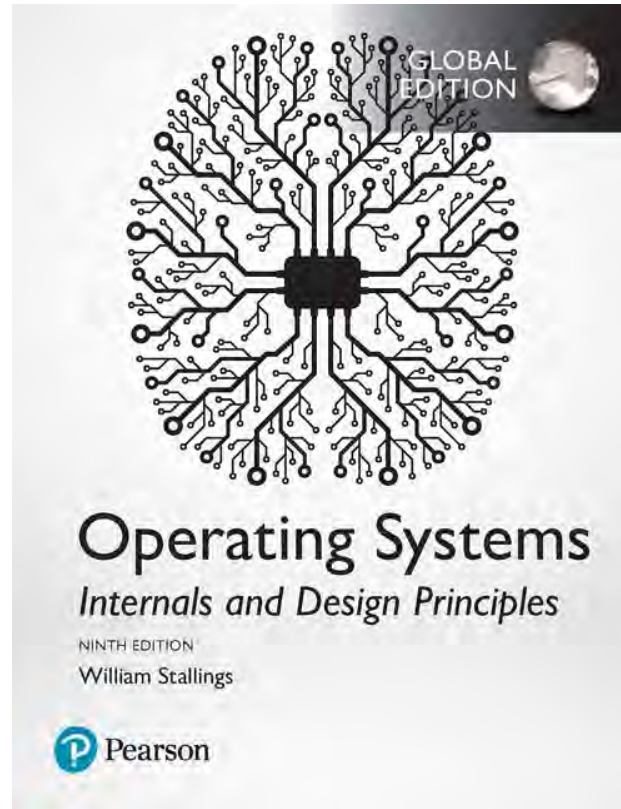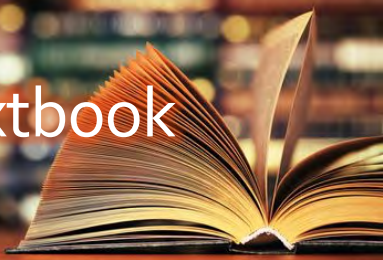
- Structure and organization of an operating system
  - System architecture
  - Processes e Thread
  - Synchronization, Mutual Exclusion and Deadlock
  - Memory management
  - Management of external devices
  - File System

- Virtualization and Cloud computing

- Real Time Operating Systems and Embedded Operating Systems

- Mobile devices and IoT devices

- Practical experience on Linux

Textbook

Operating Systems
Internals and Design Principles

NINTH EDITION

William Stallings

Pearson

http://williamstallings.com/OperatingSystems/

Learning Materials

- **http://people.unica.it/giorgiogiacinto/didattica/insegnamenti/material/os/** includes
  - the lecture scheduling
  - all the presentations
  - the lab activities

- Complementary Textbook
  - **Silberschatz**, **Gagne**, **Galvin**, *Operating Systems Concepts*, Wiley, 2018

- The **Linux** Operating System ...and any other Operating System of your choice

Questions, Contact hours and more

- You can always interrupt my speech to ask for explanations

- You can also ask questions during the breaks

- You can ask for an appointment in my office

- You can ask questions by email

The Exam

- The exam is made up of two parts
  - A **written test** with open questions, closed questions, and exercises that is worth **20 points** (min 10 points to pass). Length: 120 min
  - **Lab tests** on using Linux system calls in C programs for a total of **12 points**

  The final **grade** is the sum of the points in the two parts

- During the **semester** you can take the **written test** subdivided **into two parts**. one in November and one in January
  - 100 min for each part
  - 10 points (min 5 points to pass) on each part

- After the correction of the written test, you can ask for an oral exam to increase the grade