
COURSE: OPERATING SYSTEMS

ACADEMIC YEAR: 2018/2019

TYPE OF EDUCATIONAL ACTIVITY: (Basic, Characterizing, Affine, Free choice, Other) BASIC

TEACHER: GIUSEPPE CAGGIANESE

 e-mail: giuseppe.caggianese@unibas.it

website:

phone:

mobile (optional):

 Language: **ITALIAN**

 ECTS: (lessons e
tutorials/practice) **6**

 n. of hours: (lessons e
tutorials/practice) **48**

 Campus: Potenza/Matera
 Dept./School: **POTENZA**
 Program: **SCIENZE E TECNOLOGIE
INFORMATICHE**

 Semester: **ANNUAL**

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The purpose of this course is to introduce the student to structure and management of an operating system. This goal is pursued describing the file system interface and implementation, the definition of the structure, the scheduling algorithms, the memory management and I/O System.

The main obtainable skills:

- Understand how is structured and managed an operating system
 - Distinguish the different process management implemented in a modern operating system.
 - Identify the process synchronization methods
 - Evaluate the best solutions for managing memories in modern Operating Systems
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PRE-REQUIREMENTS

Basic knowledge of Procedural Programming, it would be appropriate also to have knowledge of Computers Architecture.

SYLLABUS

- Operating-System Structures
 - Processes
 - Threads
 - Process Synchronization
 - CPU Scheduling
 - Deadlocks
 - Main Memory
 - Virtual Memory
 - Mass-Storage Structure
 - File-System Interface
 - File-System Implementation
 - I/O Systems
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TEACHING METHODS

48 hours divided into theoretical lessons and exercitations.

EVALUATION METHODS

Written examination followed by an Oral examination.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Lecture notes provided by the teacher, available on the website of the course hosted the Moodle platform.
 - "Operating system concepts 9th edition". SILBERSCHATZ, Abraham; GALVIN, Peter Baer; GAGNE, Greg. Edition Binder Ready, 2006. ISBN 1118129385
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INTERACTION WITH STUDENTS

Office hours:

- Every Friday from 5 pm to 7 pm
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EXAMINATION SESSIONS (FORECAST)¹

- June 21, 2019
- July 19, 2019
- September 13, 2019
- November 22, 2019
- February 07, 2020
- April 03, 2020

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION

¹ Subject to possible changes: check the web site of the Teacher or the Department/School for updates.