



UNIVERSITY OF BASILICATA STUDIES
DEPARTMENT OF MATHEMATICS, INFORMATICS AND ECONOMICS

COURSE: Operating Systems

ACADEMIC YEAR: 2019-2020

TYPE OF EDUCATIONAL ACTIVITY: Characterizing

TEACHER: dr. Domenico Daniele Bloisi

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phone: 0971 205841

mobile (optional):

Language: Italian

ECTS: 6

n. of hours: 48

Campus: Potenza
Dept./School: DiMIE
Program: SCIENZE E TECNOLOGIE
INFORMATICHE

Semester: first

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

This course aims at providing students with an introduction to the basic concepts and components of modern operating systems. Upon completion of the course, students are expected to be able to understand the key concepts and mechanisms of modern operating systems:

- Processes and process management, including threads and concurrency management, physical and virtual memory management techniques
 - On-line storage methods (file systems),
 - 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. Students can ask to prepare a project to obtain a bonus up to 3 points.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Slides will be available for the students on Moodle and at <http://web.unibas.it/bloisi/corsi/sistemi-operativi.html>

Textbook reference:

- Silberschatz, P. B. Galvin, G. Gagne. Sistemi operativi Concetti ed esempi 10a Ed. - Pearson (in Italian)
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INTERACTION WITH STUDENTS

During the office hours or by email. The lecturer will also use the e-learning platform to share files and to communicate information to the students (e.g., forum).



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EXAMINATION SESSIONS (FORECAST)¹

09 Jan 2020;
13 Feb 2020;
08 Apr 2020;
09 Jul 2020;
24 Sept 2020;
17 Dec 2020.

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION

Please visit <http://web.unibas.it/bloisi/corsi/sistemi-operativi.html> for updates

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