
Distributed Systems

Computer Engineering Laurea
Magistrale degree, II year

Distributed Systems

Instructor: Carlo Ferrari, Ph.D, Professor,
Michele Stecca, Ph.D

Department of Information Engineering,
The University of Padova

a.y. 2023/2024

...Course goal...

“ **Systematically** present the fundamental problems concerning the Distributed Systems **Design** with particular reference to the following issues:

- ★ **Heterogeneity,**
 - ★ **Scalability,**
 - ★ **Resource Sharing,**
 - ★ **Security,**
 - ★ **Fault Tolerance,**
 - ★ **Concurrency Control**
-

...Main topics...

- Models and architectures
 - Distributed objects and remote invocation
 - Dependability and fault tolerance
 - Security
 - Distributed Algorithms
 - Distributed Transactions
 - Programming tools
-

...application domains...

- ❑ Distributed Supercomputing
 - ❑ On-demand Computing
 - ❑ Data-Intensive Computing
 - ❑ Collaborative Computing
 - ❑ Multimedia
-

...Reference book...

- A.S. Tanenbaum, M. Van Steen, “Distributed Systems: Principles and Paradigm”, Prentice-Hall, IV edition, 2023
 - Papers about specific topics...
-

...more reference books...

- George Coulouris, Jean Dollimore, Tim Kindberg, “Distributed Systems: concepts and design”, fifth edition, Addison-Wesley.
 - M.L. Liu, “Distributed Computing, principles and applications”, Pearson 2004
 - J. Graba, “An introduction to Network Programming with Java”, Addison-Wesley, 2003
-

...course organization...

- 9 CFU, 72 hours until half of January
 - Classroom lectures
 - Lecture schedule:
 - Wednesday, 8.30-10.30, Aula De,
 - Thursday, 10.30-12.30, Aule De,
 - Friday, 12.30-14.30, Aula De,
-

...course organization...

- Office hours (tentative):
 - Tuesday, 10.15-12.15,
carlo@dei.unipd.it,
049-827.7729,
during class...



...Requirements...

- Programming,
 - Data Structures and Algorithms,
 - Computer Architecture,
 - Computer Networks,
 - Database,
 - Operating Systems.
-

...Supplementary materials...

□ <https://stem.elearning.unipd.it>

...standard final exam: oral test

- 4 test in the academic year
 - ❑ 2 test, at the end of the first semester – winter session
 - ❑ 1 test in the recovery session (August-September)
 - ❑ 1 test in the summer session, at the end of the second semester
-

...standard final exam: oral test

- It is an oral test
 - Any students can choose the standard exam, any session.
 - No constraints in participating in any of the 4 tests
-

...standard final exam: oral test

- Join the test using UNIWEB
- ...do not ask the instructors...

...standard final exam: oral test

- Oral test...
 - Question 1: 33%
 - Question 2: 33%
 - Question 3: 33%

...final exam: paper presentation

- (Maybe) a single final test at the end of the course
 - Presentation of a paper from a recent conference/workshop/symposium
 - Proposed by the Professor
 - Three-phase negotiation
 - Proposal...OK/NO
 - Proposal... OK/NO
 - Proposal... OK...if NO: oral exam
-

...final exam: paper presentation and evaluation

- ...like a congress presentation
 - plus your own eval about...
 - Originality
 - Technical meaning
 - Presentation
 - Focus
 - Evaluation: from 1 (Fair) to 5 (Very good)
 - During presentations all attendees can ask questions
-

...final exam: paper presentation and evaluation

- The presentations are organized as sessions and can be scheduled anytime during the academic year
 - no need to use UNIWEB
-

Distributed Systems

- Course site:

<https://stem.elearning.unipd.it>

- Lab sessions:

... Currently non available ☹️

Distributed Systems

- Laurea magistrale thesis
21 CFU
 - Distributed Systems Lab...
 - Internship outside DEI...
-

-
- If you are not interested in Distributed Systems anymore, please...

LEAVE THE ELEARNING SITE OF THE
COURSE

Thank you!

- ...otherwise, stay on the elearning site to receive further information...
-

...Distributed Systems...

End
