EXTRACT OF THE TEACHING REGULATIONS
MASTER'S DEGREE IN COMPUTER SCIENCE (LM-18) - A.A. 2025-2026

Admission requirements - The degree program is free access.
The general curricular requirement for admission is the possession of a three-year degree in Computer Science (Class 26 or Class L-31), or in Computer Engineering (Class 9 or L-8), or in Mathematics (Class 32 or L-35) or in Physics (Class 25 or L-30). Students with a 3-year Bachelor's degree from another class obtained in Italy or equivalent qualifications obtained abroad can be admitted if they have acquired **at least 72 ECTS (Italian equivalent CFU) credits in the INF/01 or ING/INF-05 sectors or MAT* or FIS* of which at least 36 in INF / 01 or INF / ING-05 and at least 18 credits in the MAT * and FIS * sectors.** A good knowledge of English is required (Level B2 or higher).
Admission procedures - The adequacy of personal preparation, in particular on the foundations of information sciences and technologies and of the English language, is verified by evaluating the training curriculum, and possibly with a test, on specific topics that take into account the guidelines approved by the Department Council on the proposal of the Board of the CdS.
The evaluation and any verification test will be carried out by the President of the CdS or a commission delegated to do so. In the case of three-year graduates in Computer Science (class 26 or class L-31), or in Computer Engineering (class 9 or L-8), this preparation is automatically considered adequate, subject to verification of knowledge of the English language.
Erasmus – Students taking part in the ERASMUS project and students who have applied for a transfer from another course of study, or abbreviation or career reunification, should contact: pdswif@di.unipi.it
Preparatory study – There are no preparatory courses.
Degree marks system – The final mark is determined by summing the average mark for all examinations, weighted with respect to the number of CFUs, an evaluation of the curriculum and the discussion of the thesis.
Course structure – The course of study is structured in four curricula. At the time of enrollment in the first year, the student chooses one of the curricula and follows the planned study plan.
If the 9 CFUs of courses in "FREE CHOICE" are NOT chosen from the list of "AFFINI" provided for in the curriculum, the student must be authorized by the Degree Program Board. This authorization request must be sent, within three months before the end degree, to the Study Plans Committee (pdswif@di.unipi.it) which will deal with the request.
The student can also submit an *individual* study plan that does not fit into any of the curriculum.
Also in this case, the student must be authorized by the Degree Program Board. This authorization request must be sent to the Study Plans Committee (pdswif@di.unipi.it) which will instruct the practice to assess the consistency of the activities chosen by the student with the organization of the degree course.

NOTE: Since A.Y. 2025/26, the teaching regulations have been changed. These are the curricula with the new structure:

CURRICULUM Artificial intelligence FIRST YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
Artificial intelligence fundamentals (6)	Parallel and distributed systems: paradigms and models (9)
Computational mathematics for learning and data analysis (9)	Generative and deep learning (9)
Machine learning (9)	AFFINE (9)
	AFFINE (6)
SECOND YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
Human language technologies (9) (non attivo 25/26)	AFFINE (6)
Computer vision (9) (non attivo 25/26)	
AFFINE (6)	
FREE CHOICE (9)	FINAL THESIS (24)

AFFINI (6)	AFFINI (9)
3D Geometric Modeling & Processing (1 s)	Algorithm engineering (1 s)
Accelerated Computing (1 s)	Algorithm design (2 s)
Algorithmic Game Theory (2 s)	Data mining (1 s)
Competitive programming and contest (1 s)	Digital Health lab (2 s)
Computational models for complex systems (2 s)	Mobile and cyber-physical systems (2 s)
Computational neuroscience (2 s)	
Continual learning (2 s)	
Information retrieval (1 s)	
Introduction to Quantum Computing (2 s)	
Laboratory on ICT Startup Building (2 s)	
Learning on Graphs (1 s) *(non attivo 25/26)*	
Robotics (2 s)	
Scalable Distributed Computing (1 s)	
Scientific and large data visualization (2 s)	
Semantic web (1 s)	
Smart applications (1 s) *(non attivo 25/26)* **(attiva l'a.f. da 9 cfu)**	
Social and ethical issues in computer technology (2 s)	

CURRICULUM Big Data Technologies FIRST YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
Algorithm Engineering (9)	Advance databases (9)
Data Mining (9)	Bioinformatics (6)
Computational mathematics for learning and data analysis (9)	Parallel and distributed systems: paradigms and models (9)
Information Retrieval (6)	AFFINE (6)
SECOND YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
AFFINE (6)	AFFINE (9)
AFFINE (9)	
FREE CHOICE (9)	FINAL THESIS (24)
AFFINI (6)	**AFFINI (9)**
3D Geometric Modeling & Processing (1 s)	Digital Health lab (2 s)
Accelerated computing (1 s)	Generative and deep learning (2 s)
Advanced Laboratory of Complex Network Analysis (1 s)	Human languages technologies (2 s) *(non attivo 25/26)*
Algorithmic Game Theory (2 s)	ICT risk assessment (1 s)
Analysis (1 s)	Machine learning (1 s)
Competitive programming and contest (1 s)	Mobile and cyber physical systems (2 s)
Computational models for complex systems (2 s)	Peer to peer systems and blockchains (2 s)
Geospatial Analytics (1 s)	
ICT infrastructures (2 s)	
Introduction to Quantum Computing (2 s)	
Laboratory on ICT Startup Building (2 s)	
Scalable Distributed Computing (1 s)	
Scientific and large data visualization (2 s)	

CURRICULUM Foundations of Software FIRST YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
Models for programming paradigms *(ex-Principles for software composition)* (9)	Compilation Techniques *(ex-Languages, compilers and interpreters)* (9)
Advanced Programming (9)	Program Analysis (6)
AFFINE (9)	AFFINE (9)
	FREE CHOICE (9)

SECOND YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
Software Verification: Principles and *Techniques (non attivo 25/26) (ex-Software validation and verification attivo 25/26)* (9)	Software Verification Laboratory *(non attivo 25/26)* ***(ex-Laboratory for innovative software attivo 25/26)*** (9)
AFFINE (6)	
AFFINE (6)	
AFFINE (6)	FINAL THESIS (24)
AFFINI (6)	**AFFINI (9)**
3D Geometric Modeling & Processing (1 s)	Advanced databases (2 s)
Accelerated Computing (1 s)	Advanced software engineering (1 s)
Algorithmic Game Theory (2 s)	Algorithm engineering (1 s)
Artificial intelligence fundamentals (1 s)	Algorithm design (2 s)
Bioinformatics (2 s)	Computational mathematics for learning and data analysis (1 s)
Business process modelling (1 s)	Data Mining (1 s)
Competitive programming and contests (1 s)	Machine learning (1 s)
Computational models for complex systems (2 s)	Mobile and cyber-physical systems (2 s)
Distributed Algorithms (1 s)	Parallel and distributed systems: paradigms and models (2 s)
Foundations of computing (2 s) *(non attivo 25/26)*	Peer to peer systems and blockchains (2 s)
Information retrieval (1 s)	
Introduction to Quantum Computing (2 s)	
Scalable Distributed Computing (1 s)	
Social and ethical issues in computer technology (2 s)	

CURRICULUM ICT solutions architect FIRST YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
Advanced Programming (9)	Peer to peer systems and blockchains (9)
Algorithm Engineering (9)	Mobile and cyberphysical systems (9)
ICT risk assessment (9)	ICT infrastructures (6)
	AFFINE (9)
SECOND YEAR	
FIRST SEMESTER	**SECOND SEMESTER**
Advanced software engineering (9)	AFFINE (6)
AFFINE (6)	
AFFINE (6)	
FREE CHOICE (9)	FINAL THESIS (24)
AFFINI (6)	**AFFINI (9)**
Accelereted Computing (1 s)	Data mining (1 s)
Algorithmic Game Theory (2 s)	Generative and deep learning (2 s)
Business Process Modeling (1 s)	Language-based tecnology for security (2 s)
Competitive programming and contests (1 s)	Machine learning (1 s)
Distributed Algorithms (1 s)	Parallel and distributed systems: paradigms and models (2 s)
Information retrieval (1 s)	Software Verification: Principles and *Techniques (non attivo 25/26)* ***(ex-Software validation and verification attivo 25/26)*** **(1 s)**
Introduction to Quantum Computing (2 s)	
Laboratory on ICT Startup Building (2 s)	
Scalable Distributed Computing (1 s)	
Scientific and large data visualization (2 s)	