

### Useful information

For enrolment and any information about your academic career, contact the **Enrolment and Information Office of the School of Science and Technology** via Pieragostini - 62032 Camerino tel. +39 0737 637336 - [segreteriastudenti.scienze@unicam.it](mailto:segreteriastudenti.scienze@unicam.it)

Any information about curriculum, office schedules, enrolment procedures, available grants and other opportunities can be found in the **Student Handbook**, published at: [http://web.unicam.it/students/guida\\_studente.asp](http://web.unicam.it/students/guida_studente.asp)



Student Service and Internationalisation  
**Advisory Area**

tel . +39 0737 404605.06.07.08  
[orientamento@unicam.it](mailto:orientamento@unicam.it)  
via Pieragostini - 62032 Camerino  
[web.unicam.it/ateneo/strutture/aree/assint.asp](http://web.unicam.it/ateneo/strutture/aree/assint.asp)



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## Science and Technology

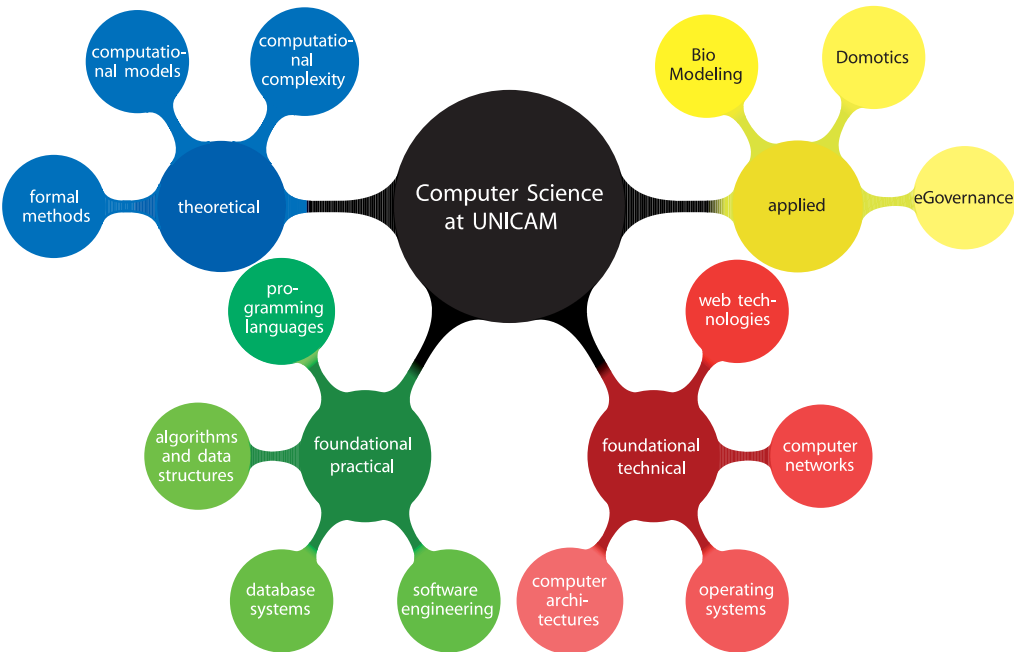
Master of Science (M.Sc.) Degree Course in

# Computer Science

LM-18

time 2 years  
centre UNICAM **Camerino**

academic year 2010 2011



### Degree course overview

Computer Science is applied in many, and often very heterogeneous, areas. To hone specific skills, UNICAM proposes a Master of Science (M.Sc.) Degree Course in *Computer Science*. Four curricula are active, with the possibility of obtaining a M.Sc. Degree also valid in Iceland and in Switzerland. The course, fully delivered in English, offers an opportunity to study in Italy, as well as to go for a year in **Iceland**, at Reykjavik University (**RU**), or in **Switzerland**, at the University of Applied Sciences Northwestern Switzerland (**FHNW**), to attend some activities and to take the relative exams. It is possible to get grants for the time spent abroad.

### Employment prospects and careers

Postgraduates in Computer Science can find a job in all areas where highly skilled IT professionals are needed, i.e. professionals able to analyse, design, manage and test systems able to process, transmit and produce information, by using advanced innovative or experimental methods, paying particular attention to the standards of reliability, performance and security. Postgraduates can apply for teaching in secondary Schools and Universities, are eligible to study for PhD and to be on the Italian Engineering register, passing an exam that is carried out by UNICAM.

### Entry requirements

Students who want to enrol on the M.Sc. Degree Course in Computer Science must have a First Level Degree or similar certification obtained abroad and acknowledged in Italy. To attend profitably the study program it is necessary to have acquired basic knowledge and skills in Computer Science, basic knowledge in Mathematics and in Physics, and certified knowledge of English (e.g. level B1 of Cambridge Certification). Students who have a Degree in Computer Science (Classe L-31 and Classe 26) will be directly admitted to the Degree Course without debts.

### Statistics

In 2008, the 81,25% of postgraduates at UNICAM found work within 3,5 months after their graduation in the following areas:

7,7%	in chemistry/energy
15,4%	in manufacturing industries
7,7%	in trade
62,9%	in informatics companies

From AlmaLaurea (2009)

### Main lines of research/study

The research activity of Computer Science teachers at UNICAM involves two main areas:

# Computer Science

## 2 years



[www.cs.unicam.it](http://www.cs.unicam.it)



### Degree Coordinator:

Prof. Emanuela Merelli  
tel. +39 0737 402567  
emanuela.merelli@unicam.it

### Student Advisory Coordinator:

Prof. Diletta Cacciagrano  
tel. +39 0737 402573  
diletta.cacciagrano@unicam.it

- **Complex Systems.** Exploiting the use of mathematical tools, methods and models for complex software system verification are studied and developed, with particular attention to those systems whose complexity hardly depends on number of components, distribution, efficiency, time constraints. In particular, the investigated issues concern:
  - \_semi-formal and formal methods for the specification and the verification of software systems
  - \_embedded and real-time systems
  - \_system biology
- **eGov.** Information technologies also affect the processes of public administration management and access to services. In this domain, safety, efficiency and interoperability result to be very relevant issues. In particular, the investigation involves the following topics:
  - \_tools for workflow management and analysis
  - \_software testing
  - \_sensor networks

### Teaching organization of the course

You can choose among four curricula: *Software System Engineering (SSE)*, *Theoretical Computer Science (TCS)*, *Intelligence Systems (IS)* and *Business Information Systems (BIS)*. The curriculum SSE is held in Camerino in the whole, while the other curricula require that students spend at least two semesters at the host University. The following table shows how teaching activities are distributed among Universities (UNICAM/RU/FHNW), first/second year (1/2A) and first/second semester (1/2S).

Activities	ETCS	SSE	TCS	IS	BIS
Complex System Design	12	UNICAM [1A1S]	UNICAM [1A1S]	UNICAM [1A1S]	UNICAM [1A1S]
Distributed Calculus and Coordination	12	UNICAM [1A1S]	UNICAM [1A1S]	UNICAM [1A1S]	UNICAM [1A1S]
Advanced English	6	UNICAM [1A1S]	UNICAM [1A1S]	UNICAM [1A1S]	UNICAM [1A1S]
Advanced Topics in Computer Science	2	UNICAM [1A2S]	UNICAM [1A2S]	UNICAM [1A2S]	
Theory of Complexity	6	UNICAM [1A2S]	UNICAM [1A2S]	UNICAM [1A2S]	
Logic, Numbers and Cryptography	12		UNICAM [1A2S]		
Neural Networks	6			UNICAM [1A2S]	
Free Choice	6	UNICAM [1A2S]	RU[2A1S]		
Service Oriented Architecture	12	UNICAM [2A1S]			
Complex System Performance Evaluation	12	UNICAM [2A1S]			
Business Process Management	6				FHNW [1A2S]
Organization, Technologies and e-Business	6				FHNW [1A2S]
IT Governance and Compliance Management	6				FHNW [1A2S]
Knowledge Engineering					FHNW [1A2S]
Project 1: Applying Research Methodology	6				FHNW [1A2S]
Information System Architecture	6				FHNW [2A1S]
Structure Science:					
Quantitative Methods for Business	6				FHNW [2A1S]
Business Science ad Economics	6				FHNW [2A1S]
Graph Theory	8		RU [2A1S]		
Semantics of Programming Languages	4		RU [2A1S]		
Virtual Environment	8			RU[2A1S]	
Natural Language Processing	4			RU[2A1S]	
Independent Study	6	UNICAM [1A2S]		UNICAM [1A2S]	
Independent Study	6			RU[1A2S]	
Free Choice	6	UNICAM [2A2S]		RU[2A2S]	FHNW [2A1S]
Thesis	30	UNICAM [2A2S]	RU [2A2S]	RU [2A2S]	FHNW [2A2S]