Università di Camerino
Scienze e Tecnologie

COMPUTER SCIENCE

Università di Camerino
MASTER DEGREE
Laurea magistrale II livello
classe LM-18
duration 2 years
ECTS 120

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Nowadays, Computer Science has applications in several fields, that are very different from each other and in constant increasing number. UNICAM proposes the Master Degree in Computer Science (Laurea Magistrale) to allow graduate students in Computer Science to specialize their knowledge, competences and skills. Different specialization programmes are proposed within the Master Degree together with the possibility to gain, in addition to the UNICAM degree, a Master degree awarded by a partner University (Double Degree).

The degree, being in collaboration with European and international institutions, is completely taught in English. Students at UNICAM are immersed in an international environment with foreign students coming from different countries. They can participate to international exchange programs such as Erasmus+ or Double Degree and spend a semester or one year abroad for exams and/or thesis. Double Degree programs are available with Reykjavik University (RU) in Iceland, with the University of Applied Sciences and Arts Northwestern Switzerland of Olten (FHNW) in Switzerland, and with the Universidad Nacional de Catamarca (UNCa) in Argentina. Scholarships of merit for supporting the mobility are offered to exchange students through UNICAM funds (if available) or, for European locations, through the Erasmus+ program.

Students willing to enroll to the Master of Science in Computer Science must have a Bachelor Degree or an equivalent foreign degree as long as that is known to be valid under current regulations. To be admitted to the Master degree it is required to have a certification for the English language at least of level B1 of the Common European Framework of Reference for Languages, or at least 3 ECTS credits of English courses done during the Bachelor. Students with an Italian Bachelor Degree in Computer Science (L-31 class) access the course with no further checks, while for any other kind of Bachelor Degree the presence of sufficient knowledge, competences and skills of Mathematics and Computer Science will be checked before the student is admitted to the program.

The Master of Science (Laurea Magistrale) in Computer Science allows to access the "Albo Professionale dell'ordine degli ingegneri" (National Engineer's Register), section A, sector "Information Engineering". To access the Register, a student must pass a special exam (Esame di Stato), for which UNICAM is an entitled site (DPR n. 328 in 5/6/2001 published on GU n. 190 in 17/8/2001).

CISCO activities, certified by the Cisco Networking Academy Program, are available as part of the degree program. This is another important opportunity for our students as Cisco Networking Academy Program is introductory for CISCO Industrial certifications, which are highly spendable in the job market.

The Master program obtained the GRIN (Gruppo di Informatica http://www.grin-informatica.it/opencms/opencms/grin) certification that guarantees high quality standards with respect to Computer Science Master degrees of Italian Universities.

HR EXCELLENCE IN RESEARCH

In the following the programmes that can be chosen within the Master Degree of Computer Science are described in details.

SMV Programme: Software Modeling and Verification
The curriculum aims at forming highly specialized analysts and software designers able to manage large and complex software projects also involving safety critical aspects. Model-driven software engineering is the main paradigm taught in this curricululm.

SMV Compulsory Exams:

1st Year	
English Language (B2 or C1 Level)	6
Complex Systems Design	12
Distributed Calculus and Coordination	12
Formal Modeling of Software Intensive Systems	6
Reactive Systems Verification	6
Curriculum Choice - SMV Exam	6
Degree Choice - Degree Exam	6
Free Choice	6

2nd Year	
Formal Languages and Compilers	6
Big Data Analytics	6
Software Project Management	12
Free Choice	6
Thesis	30
Free Choice - SMV Exams	
Queuing Networks: Simulation	6
Distributed Systems	6
IT Security	6
Business Process Management and Flexibility	6
Knowledge Engineering and Business Intelligence	6
Internetworking Ubiquitous Systems	6
Formal Languages and Compilers	6

ESS Programme: Enterprise Software Systems
The curriculum aims at integrating management concepts and information technology (IT). This results in a combination of expertises which is a prerequisite to successfully develop IT solutions for business and to provide information products and services.

ESS Compulsory Exams:

1st Year	
English Language (B2 or C1 Level)	6
Complex Systems Design	12
Advanced Databases	6
Business Process Management and Flexibility	6
Knowledge Engineering and Business Intelligence	6
Alignment of Business and IT	6
Free Choice - ESS Exam	6
Free Choice - Degree Exam	6
Free Choice	6

2nd Year	
Business Process Digitalization and Cloud Computing	6
Processes Mining	6
Software Project Management	12
Free Choice	6
Thesis	30
Free Choice - ESS Exams	
Queuing Networks: Simulation	6
Reactive Systems Verification	6
Knowledge Management and Competence Development	6
Formal Modeling of Software Intensive Systems	6
Distributed systems	6
IT Security	6

SSI Programme: Software and Systems for Industries
Embedded systems are increasingly being joined together into an "Internet of things" or sensor networks to enable several applications such as smart homes, manufacturing, energy distribution and transportation. SSI provides students with a knowledge and understanding of embedded system architectures, the concepts underpinning their interconnection and programming. Security, simulation and verification of distributed systems, where possible tailored to embedded systems, will be also part of the programme.

SSI Compulsory Exams:

1st Year	
English Language (B2 or C1 Level)	6
Complex Systems Design	12
IT Security	6
Embedded Systems: Architecture and Basic Concepts	6
Internetworking Ubiquitous Systems	6
Distributed Systems	6
Free Choice - SSI Exam	6
Free Choice - Degree Exam	6
Free Choice	6

2nd Year	
Embedded Systems Programming	6
Cyber Physical systems	6
Software Project Management	12
Free Choice	6
Thesis	30
Free Choice - SSI Exams	
Queuing Networks: Simulation	6
Networking discovery CISCO (III-IV)	6
Reactive Systems Verification	6
Distributed Calculus and Coordination - Module I	6
Formal Modeling of Software Intensive Systems	6
Formal Languages and Compilers	6
Degree Free Choice Exams	
Theory of Complexity	6
Queuing Networks: Modeling	6
Financial Management and Strategy	6
Software Engineering II - Software Testing	6
Networking fundamentals (CISCO I-II)	6
Neural Networks	6

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Information for admissions, courses and other services
at www.unicam.it/international

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