



UNIVERSITÀ
DI CAMERINO

School of Science and Technology

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

Classe LM – 18

UNIVERSITY DEGREE COURSE HANDBOOK

Course Time: 2 years
ECTS: 120

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Academic Year 2010-2011

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UNICAM website: <http://www.unicam.it>

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Degree course website: <http://www.cs.unicam.it>

2. Introduction

This course handbook contains the main information about the regulations on the M.Sc. Degree in Computer Science, run in English. The Study Program of Postgraduate Degree in Computer Science belongs to the Classe LM-18 (Informatica).

This handbook shows in particular the training targets of the degree course, study plans, opportunities to receive a Double Degree (one legal in Italy and the other either in Switzerland or in Iceland), methods to prepare study plans, tutoring kinds, tests to assess the preparation of the students and the list of courses available for Academic Year 2010/2011.

For further information students can visit <http://www.cs.unicam.it> or they can turn to the Degree coordinator or to supporting delegates.

3. Learning outcomes and verification modalities

• Training targets qualifying the Classe LM-18

The Postgraduate Degree in Computer Science gives in-depth theoretical, methodological, experimental and application skills in the fundamental areas of Computer Science. These areas represent the conceptual and technological basis for the IT approach to the study of problems and for the design, production and use of applications requested by IT society in order to organize, manage and access information and knowledge.

Therefore, postgraduates will be able to carry out planning, design, development, supervision of complex software systems projects, assessment, test and management of computer networks and complex or innovative software systems for the production, transmission and processing of information even when advanced innovative or experimental methodologies are involved. This allows postgraduates to establish new theoretical developments of Computer Science topics in the relative application areas and to operate at design and decision level in all IT areas.

Postgraduates in Computer Science need in particular:

- to have solid knowledge of both foundations and application aspects in several Computer Science areas;
- to deeply know the scientific method of investigation, to understand and use the instruments of discrete and continuum mathematics, of applied mathematics and of physics supporting Computer Science and its applications;
- to know foundation technologies and methods of design and development for both basic and application software systems;
- to have knowledge of different application areas;
- to have business skills;
- to be able to fluently use at least a language of the European Union written and oral in addition to Italian also with reference to topic jargon;
- to be able to work autonomously even having responsibilities of projects and departments.

For this reason, study plans of Postgraduate Degree in Computer Science include:

- lessons and laboratory exercises in addition to suitable independent practical activities and suitable individual activities at laboratories;
- in relation to specific targets, external activities such as placements at companies, public administrations and research laboratories in addition to other Italian and European universities even within international agreements.

• Specific training targets of the course

Postgraduates in Computer Science from UNICAM need to have the following qualifications, expressed by European higher education descriptors:

Knowledge and understanding	Postgraduates have in-depth knowledge about mathematical notions and theoretical Computer Science notions essential for the analysis and the design of complex IT systems. In particular: they can understand and use the instruments of discrete and continuum Mathematics, of applied Mathematics and Physics supporting computer science and its applications; they have advanced knowledge in specific areas, such as networks, software engineering,
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	<p>information systems, security and cryptology in addition to an in-depth culture in the central areas of Computer Science; they have a good understanding of mathematical instruments necessary for formal modelling, analyses, assessment, optimization and invention of IT systems.</p> <p>The above mentioned knowledge is obtained through: the participation in lectures, the participation in exercise sessions, the tutored personal study, and the individual study. Moreover, the preparation of the final thesis contributes to the acquisition of the above mentioned knowledge. Students will be mainly tested on this knowledge by written and/or oral exams.</p>
<p>Applying Knowledge and understanding</p>	<p>Postgraduates can apply their knowledge and understanding to show their professional approach to the solution of complex software problems. In particular: they can deeply apply the scientific research method to analyse problems in several application domains for their solving by modelling, developing and testing complex systems; they can design, develop and manage complex IT systems; they have managerial skills, such as ability to organize other people’s job and ability to relate to the staff they are in charge of; they have ability to plan and manage their own time.</p> <p>The above mentioned skills are obtained by the characterizing activities through the critical consideration of books suitable for individual study - mentioned during lectures - the examination of case studies discussed by professors, the carrying out of exercises and individual/group projects, and the preparation of the final thesis. Students will be tested on these skills by written and/or oral exams, reports and exercises including the carrying out of specific activities where students show the knowledge of instruments, methods and critical autonomy.</p>
<p>Making judgements</p>	<p>Postgraduates need to have a high ability to reason critically, to identify the most suitable methods for the analysis and the solution of complex IT problems, to design advanced systems, to understand limits of their own knowledge and to independently start investigation suitable for their own level of knowledge and understanding. In particular: they can judge and assess medium and long-term innovative information technologies; they can be analytic and concise (in general); they have general logical-deductive reasoning, not directly linked to information context (reasoning ability).</p> <p>The design activities as well as personal/group papers and the final thesis offer students the chance to develop their own decisional and judgement abilities independently. They also offer the ability to get and assess information sources, data and scientific literature. Students will be verified on the acquisition to make judgements during exams, in particular those exams including a design activity within IT topics.</p>
<p>Communication skills</p>	<p>Postgraduates need to have the ability to communicate and write reports in English documenting and showing the work carried out during a design or laboratory phase. In particular: they can introduce oral and written scientific materials and topics to an informed audience; they can understand and use English language fluently; they can work in teams as well as independently and understand customers’ requests.</p> <p>The communication skills are developed in a natural way because lessons are taken in English. Moreover, communication skills in English and social relationship with foreign students and teachers will be favoured thanks to the availability of the Double Degree programme (see later). Written and oral communication skills are developed through the characterizing teaching activities that include the preparation of reports and written documents, the participation in team works for the carrying out of projects, oral reports, and tests. Moreover, the acquisition of the communication skills is provided by the preparation and the discussion of the final thesis. A lot of tests include oral exams, discussion of projects even through the use of multimedia tools, and presentations with slides.</p>

Learning skills	<p>Postgraduates will have to develop skills allowing them to keep update in the chosen specialization area as well as to start new in-depth study both in theoretical fields - such as enrolment for a PhD - and professionalizing - such as enrolment for a post-university course. In particular:</p> <ul style="list-style-type: none"> they have inclination to study update about the available IT instruments; they have gained such a knowledge and competence standard that gives them the chance to undertake study at doctoral level. <p>Learning skills are carried out during the degree course with attention to individual study, to the presentation of individual projects and to the activity for the preparation of the thesis.</p> <p>Learning skills are verified by steady tests during the training activities also assessing the ability to respect deadlines. Moreover, they are verified by requesting the presentation of data found independently, by the tutoring activity during the carrying out of projects and by the assessment of the ability to learn autonomously obtained during the preparation of the final thesis.</p>
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The Postgraduate Degree in Computer Science aims to train IT professionals with solid knowledge of both principles and application aspects in several areas of Computer Science. The solid basic training will allow postgraduates both to successfully tackle and to contribute to the technological progression. Moreover, postgraduates can go on with further studies at advanced level, such as PhD.

4. Description of the teaching curriculum

The training curriculum of the course aims to prepare postgraduates with both in-depth knowledge of theoretical principles of Computer Science and specific knowledge of sectors involving different teaching curricula.

A teaching curriculum can be made up of courses offered by UNICAM or of common courses offered by UNICAM and Reykjavik University as well as UNICAM and University of Applied Sciences Northwestern Switzerland (FHNW), (because of the signed agreement for a Double Degree postgraduate course in Computer Science) and special courses offered by the respective universities according to their competence. Other Double Degrees with other foreign Universities are being considered.

In the first year, all postgraduates will have to get the same training targets which are common to all study plans, such as skills in distributed calculus and coordination models, skills in design and analysis of complex software systems, and in-depth knowledge in theory of complexity. Moreover, postgraduates will acquire advanced English skills and they will have to deeply know the scientific method of investigation and understand - and use - of knowledge in advanced topics in Computer Science so as to get the necessary knowledge for the specific chosen curriculum.

In the second year, once postgraduates have chosen the field and the university, they eventually move to that university and specialize with the purpose of getting advanced skills in specific fields characterizing that particular university.

The available fields include the following areas: design of complex software systems, intelligent systems and theoretical Computer Science. At present the available choices are to stay in Camerino or to go to Reykjavik University/ FHNW University. UNICAM is considering reaching an agreement with other foreign Universities.

- ***Double Degree opportunities***

Study plans and Double Degree programs are described in detail in Section 7. In the following, we give a brief description of the Double Degree opportunities offered by the Postgraduate Degree Course.

UNICAM + Reykjavik University	Postgraduate students can get a Double Degree in Computer Science under the agreement between the School of Computer Science of Reykjavik University, Iceland (RU)
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	<p>and the School of Science and Technology of UNICAM.</p> <p>This program allows graduate students from the School of Computer Science of RU and graduate students from the School of Science and Technology of UNICAM to simultaneously pursue the M.Sc. Degree in Computer Science from RU and the M.Sc. Degree in Computer Science from UNICAM.</p> <p>The following titles are awarded upon successful completion of the present Double Degree program:</p> <ul style="list-style-type: none"> - Master in Computer Science (M.Sc.) from the School of Computer Science of RU <p>and</p> <ul style="list-style-type: none"> - Laurea Magistrale/Master of Science (M.Sc.) in Computer Science from the School of Science and Technology of UNICAM. <p>The program requires that students spend at least two semesters at the host University. UNICAM and RU accept to transfer semester credits obtained by a student in the other institution to be taken into account towards the degree awarded by the home institution subject to their internal rules and regulations.</p> <p>Students are granted mobility scholarships yearly by UNICAM in order to stay at the foreign University for requested periods. For further information please contact the International mobility and ERASMUS coordinator.</p>
<p>UNICAM + FHNW University</p>	<p>Postgraduate students can get a Double Degree in Computer Science and Business Information Systems under the agreement between the School of Business of FHNW and the School of Sciences and Technologies of UNICAM.</p> <p>This program allows graduate students from the School of Business of FHNW and graduate students from the School of Sciences and Technologies of UNICAM to simultaneously pursue the M.Sc. Degree in Business Information Systems from FHNW and the M.Sc. Degree (Laurea Magistrale) in Computer Science from UNICAM.</p> <p>The following titles are awarded upon successful completion of the present Double Degree program:</p> <ul style="list-style-type: none"> - Master of Science (M.Sc.) in Business Information Systems from the School of Business of FHNW <p>and</p> <ul style="list-style-type: none"> - Laurea Magistrale in Informatica (Master in Computer Science) from the School of Sciences and Technologies of UNICAM. <p>The program requires that students spend at least one semester at the host University plus the Master thesis of 30 ECTS accepted by both Universities. UNICAM and FHNW accept to transfer semester credits obtained by a student in the other institution to be taken into account towards the degree awarded by the home institution subject to their internal rules and regulations.</p> <p>Students are granted mobility scholarships yearly by UNICAM in order to stay at the foreign University for requested periods. For further information please contact the International mobility and ERASMUS coordinator.</p>

5. Admissions rules and entry requirements (D.M. 270/04)

Students who want to enrol on the Postgraduate Degree in Computer Science must have

- a First Level Degree or similar certification obtained abroad and acknowledged in Italy according to the laws in force.

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;
- certified knowledge of English (e.g. level B1 of Cambridge Certification).

Students who want to enrol on the Postgraduate Degree in Computer Science must send their CV containing the transcripts of their academic studies. An appointed Committee will verify if the student has the necessary incoming knowledge that represents the necessary condition to enrol on the Postgraduate Degree in Computer Science. The Committee may decide to interview the student and accept the student for the Postgraduate Degree in Computer Science by giving the student an individual study plan, always with respect to the regulation in force, that guarantee the achievement of learning outcomes of the Postgraduate Degree in Computer Science.

Students who have a Degree in Computer Science (Classe L-31 of the DM/270 and Classe 26 of ex DM/509) received by UNICAM, or by one of the International Universities that signed a MoU with UNICAM, or by any of the Italian Universities whose Degree in Computer Science received a quality assurance certification "bollino blu" from GRIN, will be directly admitted to the Postgraduate Degree in Computer Science.

6. Employment Prospects and Careers

Postgraduates in Computer Science can find a job in all areas where highly skilled IT professionals are needed, that is professionals able to analyse, design, manage and test systems able to process, transmit and produce information, by using advanced innovative or experimental methods, paying attention to the standards of reliability, performance and security. In particular:

- IT systems for areas such as industry, environment and territories, the national health service, science, the arts and public and private sectors;
- innovative applications within the processing of images and sounds, artificial vision systems, neural networks, AI, soft computing, computational simulations, security, data privacy and its access, computational graphics, the interaction of a computer with a user and with multimedia systems.

are extremely important in finding a job.

Postgraduates can apply for teaching in secondary Schools and Universities - according to the rules provided for by the regulation in force - and are eligible to study for PhD.

• Italian Engineering Register

Postgraduates in Computer Science are eligible to be on the Italian Engineering register, Information area, department A, but they must pass an exam that is carried out by UNICAM. (Reference law: DPR n.328 5th June 2001 - issued on GU (official gazette) n.190 dated 17th August 2001).

The exam is divided into the following tests:

- a written test concerning the subjects of the area they ask to be registered;
- a second written test on subjects within one of the areas concerning the postgraduate degree;
- an oral test on subjects concerning the written tests and on legislation and ethics;
- a practical on design within one of the areas concerning the postgraduate degree.

The exam for (senior) engineer provides two sessions, one in summer and one in winter.

7. Teaching Organization

The teaching organization of the Postgraduate Degree in Computer Science is mainly carried out on-line at <https://didattica.unicam.it>.

• European Credit Transfer and Accumulation System (ECTS)

The acquisition of knowledge and skills by students are assessed by credits. The credits represent their learning work including individual studies and practise (also laboratory) necessary to get the Postgraduate Degree in Computer Science. 60 credits represent the medium study workload carried out by a full-time student with suitable starting preparation for one academic year.

Students have to get 120 credits to obtain the Postgraduate Degree in Computer Science. The ratio of time spent for tutored activities and time spent for individual studies within the programme of training activities should usually be about

1:3. One credit is equal to a 25-hour standard workload for each student: for example, one credit might be equal to 7 hours of lectures in classroom or 8 hours in laboratory.

12- and 6-ECTS courses are provided in the curriculum of Postgraduate Degree in Computer Science. These courses can include seminar activities as “independent studies”, related to any study plan offered by the Postgraduate Degree Course.

- **How to assess training activities**

All activities concerning ECTS must be assessed. The assessment is expressed by specific committees chaired by the staff in charge of training activities. Exams are carried out written and/or oral or with other procedures suitable for particular kinds of activities. Students may be tested during the courses to verify their profit. Participation to these tests is optional and the result does not jeopardize the admission to the final exam.

Tests to verify students' profit are also available for courses divided into modules (at the end of each module). If not different indicated, training activities are assessed by a grade espressa in numbers between 18 and 30, possibly “cum laude”.

It is necessary to verify the course attendance and write a report on carried out activities signed by the teacher/supervisor to attribute credits for placements or apprenticeships. These assessments can be expressed with only 2 grades: “idoneo” (suitable) or “non idoneo” (not suitable).

- **Credit recognition**

The Council of Study Programme (CdS) can recognize training activities carried out at other study programmes, even of other Universities, or skills and knowledge. The relative credits are given by considering the activity contribution to get to the training targets of Postgraduate Degree Course.

- **Scholarships**

Several scholarships and incentives are available to promote the enrolment on Postgraduate Degree in Computer Science for brilliant and motivated students. Moreover, UNICAM calls for scholarships addressing to students enrolled on Postgraduate Degree Course yearly. Further information will be available at <http://www.unicam.it>.

- **Lecture and exam calendar**

The teaching activity is divided into 2 semesters according to the following calendar:

		Begin	End
I Semester	Teaching Activity	4 October 2010 (I anno)	28 January 2011
		4 October 2010 (II e III anno)	
	I Exam Session	31 January 2011	26 February 2011
II Semester	Teaching Activity	28 February 2011	11 June 2011
	II Exam Session	13 June 2011	30 July 2011
	III Exam Session	1 September 2011	1 October 2011

Information about timetables and rooms where lessons are taken are available at <http://www.unicam.it/studenti/OrariLezioni/>.

Exam sessions are provided for every course at the end of each period. The teachers will have to inform students about the kind of exam for each course quite in advance; the exam will only be oral if not specified. Exams can include the carrying out of projects and seminars, suitable for promoting the grade of autonomy and independence in the student. The student

who wants to take an exam is obliged to register on-line for the session of the specific course at <https://didattica.unicam.it> with username and password supplied when the student enrolls.

The exam programme is the last teaching programme carried out for the same course. Therefore the programme carried out during the course will generally be valid for 12 months from the end of teaching activities.

The calendar of exam sessions and teaching programmes are available at <https://didattica.unicam.it>

- **Final exam and graduation**

The final exam consists of a public discussion of an English written thesis, prepared by the student with the supervision of a teacher chosen by the student, on a specific topic.

The final exam grants 30 ECTS. The topic should be possibly linked to real problems suggested by industries and companies in Italy or abroad.

Students can access the activity linked to the final exam after getting at least 60 ECTS.

The Degree grade is expressed in numbers between 66 and 110, possibly “cum laude”. It assesses students’ curriculum, their preparation and their scientific maturity reached at the end of the Degree Course. The grade is assessed by a suitable committee made up according to the University Teaching Regulations.

The classification of theses and the detailed rules and procedures on how the degree grades are given, are available at <http://www.cs.unicam.it>.

- **Study plans and Double degree**

The Postgraduate Degree Course in Computer Science provides very up-to-date courses. Advanced courses on languages and notations for design, analysis, implementation and test of complex, concurrent, distributed systems, coordination and cooperation systems are provided. Additional courses are available on innovative technologies for digital services and IT security. In addition to these highly professionalizing courses, analyses on Computer Science foundations (also concerning new Computer Science frontiers) are provided to give the students a solid basic preparation towards further studies that postgraduates can undertake, e.g. PhD.

The offered courses are aimed at improving the qualifications received with the Undergraduate Degree Course in Computer Science.

The Postgraduate Degree in Computer Science has four advised study plans, giving students the chance to identify the right one meeting their interests and abilities:

- **Complex System Design** curriculum is addressed to students interested in learning advanced techniques of complex systems software engineering and model driven systems engineering. The curriculum is fully available at UNICAM and allows students to receive the Postgraduate Degree in Computer Science without any mobility requirement.
- **Theoretical Computer Science and Artificial Intelligence** curricula are the result of the strong collaboration between UNICAM and Reykjavik University (RU). They allow students to receive a Double Degree in Computer Science, the Laurea Magistrale in Computer Science and the M.Sc. in Computer Science by studying for one year at UNICAM and one year at RU. In particular:
 - **Theoretical Computer Science** curriculum is addressed to those students that are interested in learning the foundations of the theory of computation, of the theory of programming languages and of the theory of concurrency.
 - **Artificial Intelligence** curriculum is for those students interested in learning simulation models and technologies that are behind the world of avatars, virtual environments and robots so as game playing.
- **Business Information Systems** curriculum is addressed to students that aim to be employed in the area of information management, business processes management and automation, knowledge engineering so as business science and economics. Such a curriculum is the result of a promising collaboration between UNICAM and FHNW University, it allows students to receive the Laurea Magistrale in Computer Science and the M.Sc. Degree in Business Information Systems by studying for at least one year at FHNW after the first semester at UNICAM.

• **Complex System Engineering Curriculum - UNICAM**

This study plan is fully available at UNICAM. Students who pass the final exam will be given the **Laurea Magistrale/M.Sc. in Computer Science**. The study plan is shown in the following two tables.

I year					
I semester					
Course	Scientific Disciplinary Sector	ETCS *	Modules*	Kind of the activity *	Grade or Suitability
Complex System Design	INF/01	6	CSD	b	Grade
	INF/01	6	CSD Project		
Distributed Calculus and Coordination	INF/01	6	DCC	b	Grade
	INF/01	6	DCC Project		
Advanced English	L-LIN/12	6		f	Grade
II semester					
Advanced Topics in Computer Science	INF/01	6	ATCS	b	Grade
	INF/01	6	ATCS Project		
Financial Management and Strategy	SECS-P/08	6		c	Grade
Theory of Complexity	INF/01	6		b	Grade
Free Choice		6		d	Grade

II year					
I semester					
Course	Scientific Disciplinary Sector	ETCS *	Modules*	Kind of the activity *	Grade or Suitability
Service Oriented Architecture	ING-INF/05	6	SOA	b	Grade
	ING-INF/05	6	SOA Project		
Complex System Performance Evaluation	ING-INF/05	6	CSPE	c	Grade
	ING-INF/05	6	CSPE Project		
Free Choice		6		d	Grade
II semester					
Thesis		30		e	
Tipologia dell'Attività Formativa:					
<ul style="list-style-type: none"> a. basic activity b. specialization activity c. integrative activity d. free choice e. thesis f. other linguistic, informatics, communication, etc. activities 					

- Business Information Systems Curriculum – UNICAM + FHNW University (Swiss)**

This study plan includes a mobility towards University of Applied Sciences Northwestern Switzerland for the entire second year. Students who pass the final exam will be given the Double Degree: **Laurea Magistrale/M.Sc. in Computer Science** by UNICAM and **M.Sc. in Business Information Systems** by FHNW.

The study plan is shown in the following tables.

I year					
I semester UNICAM					
Course	Scientific Disciplinary Sector	ETCS *	Modules*	Kind of the activity *	Grade or Suitability
Complex System Design	INF/01	6	CSD	b	Grade
	INF/01	6	CSD Project		
Distributed Calculus and Coordination	INF/01	6	DCC	b	Grade
	INF/01	6	DCC Project		
Advanced English	L-LIN12	6		f	Grade
II semester FHNW					
Advanced Topics in Computer Science	INF/01	6	ATCS	b	Grade
	INF/01	6	ATCS Project		
Financial Management and Strategy	SECS-P/08	6		c	Grade
Theory of Complexity	INF/01	6		b	Grade
Free Choice		6		d	Grade

II year					
I semester FHNW					
Information System Architecture / Enterprise Architecture Modelling	INF/01	6		b	Grade
Organizations, Technologies and E-business	SECS-P/08	6		c	Grade
IT Governance and Compliance Management	SECS-P/08	6		c	Grade
Business Process Management	INF/01	6			
Free Choice		6		d	
II semester FHNW					
Thesis		30		e	

Theoretical Computer Science Curriculum – UNICAM + Reykjavik University (RU-Iceland)

This study plan includes mobility towards Reykjavik University for the entire second year. Students who pass the final exam will be given the Double Degree: **Laurea Magistrale/M.Sc.in Computer Science** by UNICAM and **M.Sc. in Computer Science** by Reykjavik University. The study plan is shown in the following tables.

I year					
I semester UNICAM					
Course	Scientific Disciplinary Sector	ETCS *	Modules*	Kind of the activity *	Grade or Suitability
Complex System Design	INF/01	6	CSD	b	Grade
	INF/01	6	CSD Project		
Distributed Calculus and Coordination	INF/01	6	DCC	b	Grade
	INF/01	6	DCC Project		
Advanced English	L-LIN12	6		f	Grade
II semester UNICAM					
Advanced Topics in Computer Science	INF/01	6	ATCS	b	Grade
	INF/01	6	ATCS Project		
Logic, Numbers and Cryptography or Quantum Computing and Information	MAT/01	6	Logic	c	Grade
		6	Numbers and Cryptography		
	FIS/02	6	Quantum Computing	c	
		6	Quantum Information		
Theory of Complexity	INF/01	6		b	Grade
II year					
I semester RU					
Course	Scientific Disciplinary Sector	ETCS *	Modules*	Kind of the activity *	Grade or Suitability
Graph Theory		8		b	Grade
Semantics of Programming Languages		4		b	Grade
Independent Study		6		c	
Free Courses		12		d	
II semester RU					
Thesis		30		e	

- Intelligent Systems Curriculum – UNICAM + Reykjavik University RU-Iceland)**

This study plan includes a mobility towards Reykjavik University for the entire second year. Students who pass the final exam will be given the Double Degree: **Laurea Magistrale/M.Sc. in Computer Science** by UNICAM and **M.Sc. in Computer Science** by Reykjavik University.

The study plan is shown in the following tables.

The students attending Postgraduate Degree in Computer Science can include, as *free course*, optional courses offered by the School of Science and Technology for the current Academic Year in addition to the courses of other Degree Courses from UNICAM or from other Italian or foreign Universities in their study programme.

I year					
I semester UNICAM					
Course	Scientific Disciplinary Sector	ETCS *	Modules*	Kind of the activity *	Grade or Suitability
Complex System Design	INF/01	6	CSD	b	Grade
	INF/01	6	CSD Project		
Distributed Calculus and Coordination	INF/01	6	DCC	b	Grade
	INF/01	6	DCC Project		
Advanced English	L-LIN12	6		f	Grade
II semester UNICAM					
Advanced Topics in Computer Science	INF/01	6	ATCS	b	Grade
	INF/01	6	ATCS Project		
Theory of Complexity	INF/01	6		b	Grade
Neural Networks	MAT/09	6		c	
Independent Study		6		c	Grade

II year					
I semester RU					
Course	Scientific Disciplinary Sector	ETCS *	Modules*	Kind of the activity *	Grade or Suitability
Virtual Environment		8		b	Grade
Natural Language Processing		4		b	Grade
Independent Study		6		c	
Free Choice		12		d	
II semester					
Thesis		30		e	

- “Free Choice” courses, activated for the 2010-2011 Academic Year**

Course	ECTS	Scientific Disciplinary Sector	Semester
e-Health and Telemedicine	6	INF/01	I e II
Business Information Systems	6	INF/01	I e II
Web 2.0	6	INF/01	I e II
Artificial Intelligence	12	INF/01	II

8. Teaching activities and teachers

Attachment A of this handbook contains in detail any information about active courses and relative teachers offered by School of Science and Technology and Degree Course for first and second year's students. Programs and information about active courses, as well teachers curricula can be also find at <http://www.unicam.it> . Schedule of the exams is available at <http://didattica.unicam.it> .

9. Teaching activities auxiliary services

• Guidance and Tutoring service

The Council of CdS promotes periodical meetings with the students through the tutoring coordinator to discuss about the general course state of training activities. The Council of CdS gives each student a tutor, the students can turn to for insertion problems, vocational guidance, planning of their own study programme.

Tutors offer a series of activities to orient and help students in their University career. It is aimed at the following people in particular:

- first-year students, helping them organize and plan their studies, informing them of the services offered by the University, finding classrooms, working out their timetable, and solving any administrative-teaching problems;
- foreign students enrolled at UNICAM to help them living in Camerino and University.

The Council of CdS also organizes activities of vocational guidance for the students in the last year of Degree Course who want to go on studying or start working. Students can talk to every teacher at least two hours a week where they can get explanations about lecture topics. Students can ask for explanations by sending to the teacher an e-mail.

For further information, please contact the Guidance and Tutoring coordinators.

• Placement

The Placement service promotes practical training and internships for final-year University students or graduates, collaborating with companies and organisations where UNICAM has an agreement, or at research and inner development laboratories in UNICAM itself. The placement's aims are to complete the student's University education to a professional level.

Students from the Degree Course in Computer Science can apply for a placement only after getting 120 ECTS. The regulations of applications and grants are available on-line at <http://www.cs.unicam.it>.

Moreover supplementary courses are run by graduates, final year students or senior students and they are aimed at new students for practice, explanations, also going through the main programme subjects.

Students can ask the Placement coordinator for further information.

• International mobility

The International mobility office of UNICAM is in charge of the implementation of European and trans-national University agreements and projects.

- It promotes the mobility of scholars and students in the framework of European programmes such as ERASMUS and ERASMUS PLACEMENT.
- It provides assistance to the students wishing to apply for the scholarships offered by the Italian Ministry of Foreign Affairs;
- It deals with bilateral agreements between UNICAM and a foreign institution as exchange students and Professors;
- It also deals with candidates for degree programmes long term studies and Double and Joint Degree programmes.

Students can join programmes providing scholarships to attend courses abroad. The Council of CdS, through its ERASMUS coordinator, promotes meetings with the students to encourage the international mobility both to Universities within ERASMUS programme and to Universities where an international cooperation agreement is available.

The Council of CdS will credit the activities expressed in the learning agreement. The student who carries out a training activity abroad for at least 3 months will receive an acknowledgement at final assessment.

The Degree Course in Computer Science involving the ERASMUS programme has reached an agreement with the following European Universities:

Country	University	Language	Fund units	Time	Learning activities
ES - Spain	Universidad de Burgos	SPANISH	2	9 months	<i>Courses/Thesis for Undergraduate</i>
FI - Finland	Helsinki Metropolia University of Applied Sciences	ENGLISH	2	6 months	<i>Courses/Thesis for Undergraduate</i>
IS - Iceland	Reykjavik University	ICELANDIC (Undergraduate Study) INGLESE (Postgraduate Study)	4	6 months	<i>Courses/Thesis for Undergraduate and Postgraduate/PhD</i>
PL - Poland	Politechnika Gdanska	ENGLISH	2	6 months	<i>Courses/Thesis for Postgraduate</i>
NL – Netherlands	Technische Universiteit Eindhoven	ENGLISH	2	6 months	<i>Courses/Thesis for Postgraduate/PhD</i>
PL - Poland	Technical University of Lodz	ENGLISH	2	5 months	<i>Courses/Thesis for Undergraduate</i>
GR - Greece	Technological Institute of Larissa	GREEK	2	6 months	<i>Courses/Thesis for Undergraduate</i>
ES - Spain	Universidad de Vigo	SPANISH	2	6 months	<i>Courses/Thesis for Undergraduate and Postgraduate/PhD</i>
SE – Sweden	Mälardalen University	ENGLISH	4	5 months	<i>Courses/Thesis for Undergraduate and Postgraduate/PhD</i>
CH- Switzerland	University of Applied Sciences Northwestern Switzerland	ENGLISH	2	5 months	<i>Courses/Thesis for Undergraduate and Postgraduate/PhD</i>
PL-Polonia	Military University of Warsaw	ENGLISH	2	5 mesi	<i>Courses/Thesis for Undergraduate and Postgraduate/PhD</i>

Students can access the ERASMUS PLACEMENT programme, providing scholarships to be on a placement at European companies for the development of the thesis and international cooperation programmes available with the Master/Postgraduate Degree Course of UNICAM with European, non-European Universities and companies. Students will get full acknowledgement of the activities carried out abroad within their own curriculum.

Students can get a Double Degree UNICAM-Reykjavik University (IS) and UNICAM-FHNW University (Swiss), according to the existing agreements (see Section 7). For further information, students can turn to the International mobility office and to the ERASMUS coordinator.

10. Quality of Service certifications

The Postgraduate Degree Course in Computer Science is included in the quality assurance system certificate ISO 9001:2008 UNICAM (from AFAQ-France, French leader and one of the first certification institution at world level). Some of the main purposes of the system are to ensure students the quality of services provided through a rigorous analysis of internal organizational processes, and to quickly remove any critical situation detected or reported by the students themselves. The Quality Management System also includes support services for students including: guidance, mentoring, mobility, international internships and placement, communication, integrating and supporting educational activities, in order to contribute to the complete formation of the student.



11. Useful information

UNICAM website: <http://www.unicam.it>
School website: <http://sst.unicam.it>
Degree course website: <http://www.cs.unicam.it>
UNICAM teaching information website: <https://didattica.unicam.it>

