Università degli Studi di Firenze

Diploma Supplement

Register: 4932687

Number Register :   CE2012B032110000003

The Diploma Supplement was developed by the European Commission, Council of Europe and by UNESCO/CEPES.
The purpose of the supplement is to provide sufficient independent data to improve the international transparency and fair academic and professional recognition of qualifications (diplomas, degrees, certificates, etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It is free from any value-judgements, equivalence statements or suggestions about recognition. Information is provided in eight sections. Where information is not provided, an explanation will give the reason why.

1. Information identifying the holder of the qualification

1.1 Family name: PAPINI

1.2 First name: TOMMASO

1.3 Date of birth and Birth Place 30/09/1990 - FIGLINE VALDARNO (FI),

1.4 Student identification number or code (if available)   PPNTMS90P30D583W

2. Information identifying the qualification

2.1 Title conferred: COMPUTER SCIENCE Qualification and title conferred: DOTTORE

2.2 Main fields of study for the qualification: L-31 - COMPUTER SCIENCE

2.3 Name of institution awarding qualification (UNIVERSITY OF FLORENCE - P.ZZA SAN MARCO 50100 FIRENZE(ITALY) (State University)

2.4 Name of institution administering studies: UNIVERSITY OF FLORENCE - P.ZZA SAN MARCO 50100 FIRENZE(ITALY) (State University)

2.5 Language(s) of instruction/examination: ITALIAN

3. Information on the level of the qualification

3.1 Level of qualification: LAUREA (First degree)

3.2 Official length of programme: Years 3 Credits 180

3.3 Access requirements(s):   High School Diploma or Equivalent

Università degli Studi di Firenze

4. Information on the contents and result gained

4.1 Mode of study: FULL TIME

4.2 Programme requirements:

180 credits are usually earned subdivided into:

A - BASIC COMPULSORY SUBJECTS	54 credits
B - COMPULSORY SUBJECTS, CHARACTERISTIC OF THE CLASS	66 credits
C - SUPPLEMENTARY COMPULSORY SUBJECTS	27 credits
D - OPTIONAL SUBJECTS	12 credits
E - A FOREIGN LANGUAGE, FINAL EXAMINATION	6 credits
F - VARIOUS EDUCATIONAL ACTIVITIES	15 credits
S - STAGE AND INTERNSHIPS	0 credits

Università degli Studi di Firenze

4.3 Programme details and the individual grades/marks/credits obtained:

FIRST YEAR Courses	Date	CFU	AF	Disciplinary Area	Grades	SSD	ECTS	Conv/ Disp
ENGLISH	12/01/2010	3.00	E	781	Passed	0		
ALGORITHMS AND DATA STRUCTURES	25/06/2010	12.00	B	114	30/30	INF/01	B	
REAL ANALYSIS I	14/06/2010	12.00	A	A38	30/30	MAT/05	B	
COMPUTER ARCHITECTURE	22/06/2010	12.00	A	A37	29/30	INF/01	B	
DISCRETE MATHEMATICS AND MATHEMATICAL LOGICS	15/06/2010	9.00	A	A38	27/30	MAT/02	B	
PROGRAMMING	30/06/2010	12.00	A	A37	29/30	INF/01	B	

Total of Credits   60.00   Simple Arithmetic Average: 29.00   Weighed Arithmetic Average based on CFU: 29.11

SECOND YEAR Courses	Date	CFU	AF	Disciplinary Area	Grades	SSD	ECTS	Conv/ Disp
DATA BASES AND INFORMATION SYSTEMS	28/09/2011	9.00	B	114	28/30	INF/01	B	X
OPERATING SYSTEMS	07/06/2011	9.00	B	114	28/30	INF/01	B	X
PHYSICS	23/09/2011	9.00	A	A38	27/30	FIS/02	B	X
PROBABILITY THEORY AND STATISTICS	12/01/2011	6.00	C	780	30/30	SECS-S/06	B	X
CONCURRENT PROGRAMMING	31/01/2012	9.00	B	114	26/30	INF/01	C	
PROGRAMMING METHODOLOGIES	13/01/2011	6.00	B	114	26/30	INF/01	C	X
REAL ANALYSIS II	31/07/2012	6.00	C	780	27/30	MAT/05	B	
LINEAR ALGEBRA	11/01/2011	6.00	C	780	28/30	MAT/03	B	X

Total of Credits   60.00   Simple Arithmetic Average: 27.50   Weighed Arithmetic Average based on CFU: 27.45

THIRD YEAR Courses	Date	CFU	AF	Disciplinary Area	Grades	SSD	ECTS	Conv/ Disp
Final Exam: ALGORITHM VISUALIZATION IN HTML5.	28/11/2012	3.00	E	831	Test taken	0		
STAGE	13/11/2012	12.00	F	785	Test taken	0		
COMPUTING AND MANAGEMENT	15/02/2012	3.00	F	784	Qualified	0		
MODELS AND CALCULI FOR PHYSICS	05/09/2012	6.00	D	022	30/30	FIS/02	B	
ARTIFICIAL INTELLIGENCE	19/01/2012	6.00	D	022	27/30	ING-INF/05	B	
CODING THEORY AND COMPUTER SECURITY	08/06/2011	6.00	B	114	24/30	INF/01	C	X
THEORETICAL COMPUTER SCIENCE	12/01/2012	9.00	B	114	30/30	INF/01	B	
NUMERICAL ANALYSIS	06/11/2012	9.00	C	780	28/30	MAT/08	B	
COMPUTER NETWORKS	02/07/2012	6.00	B	114	25/30	INF/01	C	

Università degli Studi di Firenze

Total of Credits   60.00   Simple Arithmetic Average: 27.33   Weighed Arithmetic Average based on CFU: 27.57

Educational Activities Classification

A	A - BASIC COMPULSORY SUBJECTS
B	B - COMPULSORY SUBJECTS, CHARACTERISTIC OF THE CLASS
C	C - SUPPLEMENTARY COMPULSORY SUBJECTS
D	D - OPTIONAL SUBJECTS
E	E - A FOREIGN LANGUAGE, FINAL EXAMINATION
F	F - VARIOUS EDUCATIONAL ACTIVITIES
S	S - STAGE AND INTERNSHIPS

Scientific Disciplinary Sectors (S.S.D.) Classification

INF/01	Computer Science
MAT/05	Mathematical Analysis
MAT/02	Algebra
FIS/02	Theoretical Physics, Mathematical Models and Methods
SECS-S/06	Mathematics for Economics, Actuarial Studies and Finance
MAT/03	Geometry
ING-INF/05	Data Processing Systems
MAT/08	Numerical Analysis

Disciplinary Areas Classification

781	FOR THE KNOWLEDGE OF AT LEAST ONE FOREING LANGUAGE
114	INFORMATION TECHNOLOGY
A38	MATHEMATICS AND PHYSICS
A37	BASIC INFORMATION TECHNOLOGY
780	RELATED OR ADDITIONAL STUDIES
831	FINAL EXAMINATION
785	STAGE
784	OTHER
022	OPTIONAL ACTIVITIES

Università degli Studi di Firenze

4.4 Grading scheme and, if available, grade distribution guidance

Individual subjects are graded on a scale from 1 to 30, with 18 and 30 as minimum and maximum grade respectively. A 'cum laude' can be added to the maximum grade as a special distinction.

Grade From	Grade To	ECTS grades	Percentage of students who obtaine this mark in the study course
30 cum laude	30 cum laude	A	7.433
27	30	B	27.991
23	26	C	32.52
20	22	D	20.79
18	19	E	11.266

4.5 Overall classification of the qualification

Last Grade	110/110 cum laude
Accademic year:	2011/2012
Degree Date:	14 December 2012
Title of the thesis:	ALGORITHM VISUALIZATION IN HTML5.

Performance in the final examination is graded on a scale from 1 to 110, with 66 and 110 as minimum and maximum grade respectively. A 'cum laude' can be added to the maximum grade as a special distinction.

Percentage of students who obtained this mark in the study course			
Grade From	Grade To	ECTS Grade	Percentage
110 cum laude	110 cum laude	A	100
66 cum laude	110	B	0

5. Information on the function of the qualification

5.1 Access to further study

Advanced Degree - Degree 1st level University Master

5.2 Professional status

THE DEGREE COURSE IN COMPUTER SCIENCE PROVIDES A BROAD-BASED BACKGROUND IN DESIGN, DEVELOPMENT AND MAINTENANCE OF SOFTWARE SYSTEMS AND THEIR INFRASTRUCTURES. ACCORDING TO THE CHOSEN CURRICULUM, STUDENTS CAN ACQUIRE SOLID COMPETENCIES IN COMPUTER PROGRAMMING, PROGRAMMING LANGUAGES, DATABASE STRUCTURE, COMPUTER ORGANIZATION, AND OPERATING SYSTEMS.
POSSIBLE PROFESSIONAL PROFILES ARE: NETWORK ADMINISTRATOR, SOFTWARE ARCHITECT,
INFORMATION SYSTEM DESIGNER, SOFTWARE DEVELOPER.
THE COMPUTER SCIENCE DEGREE ALLOWS STUDENTS TO BE PART OF THE REGISTER OF INFORMATION ENGINEERS ("ALBO PROFESSIONALE SEZIONE B DEGLI INGEGNERI JUNIOR - SETTORE DELL'INFORMAZIONE") AND TO ACCESS TO MASTER DEGREES IN COMPUTER SCIENCE.

6. Additional Information

6.1 Additional Information

See the University website at http://www.unifi.it and the site of the Ministry of Education, University and Research at http://www.miur.it

6.2 Additional Information sources

7. Certification of the supplement

7.1 Date: 14 January 2013

7.2 Signature: VINCENZO DE MARCO

7.3 Capacity: Manager of the University of Florence

7.4 Official stamp or seal

8. Information on the national higher education system

THE ITALIAN UNIVERSITY SYSTEM *(D.M. 509/1999 and D.M. 270/2004)*

Since 1999, Italian university studies have been fully reformed so as to meet the objectives of the "Bologna process".
The university system is now organised on 3 cycles: the 1st cycle academic degree, that is the "laurea", grants access to the
2nd cycle, and the "laurea specialistica/laurea magistrale", the main degree of the 2nd cycle, gives access to 3rd cycle doctorate
programmes resulting in the degree called "Dottorato di Ricerca". In addition to the mentioned degree sequence according to
Bologna pattern, the system offers other degree programmes and related degrees both within the 2nd and 3rd cycle.

First cycle. Undergraduate studies consist exclusively in "corsi di laurea" (1st degree courses) aimed at guaranteeing undergraduate
students an adequate command of general scientific methods and contents as well as specific professional skills. General access
requirement is the Italian school leaving qualification ("Diploma di Superamento dell'Esame di Stato conclusivo dei corsi di
Istruzione Secondaria Superiore"), awarded on passing the relevant state examinations, after completion of 13 years of global
schooling; also foreign comparable qualifications may be accepted. Admission to individual degree courses may be subject to
specific course requirements. First degree courses last 3 years. The "laurea" (1st degree, and bachelor-level according to
Bologna process) is awarded to undergraduates who have earned 180 credits. The 1st degree allows transition to the labour market,
access to the civil service and/or regulated professions; it also grants access to all degree programmes of the 2nd cycle.

Second cycle. Postgraduate studies include:
A) "corsi di laurea specialistica/corsi di laurea magistrale";
B) "corsi di Master Universitario di 1° livello".

A) "Corsi di laurea specialistica/corsi di laurea magistrale" are aimed at providing postgraduates with an advanced level of
education for the exercise of a highly qualified activity in specific areas. Access to "corsi di laurea specialistica/corsi di laurea
magistrale" is by the Italian first degree or by a foreign comparable degree; admission is subject to specific course requirements
determined by individual universities; workload: 120 credits; length: 2 years.
The final degree, "laurea specialistica/laurea magistrale" (master-level according to Bologna process), is awarded to those
graduates who, once satisfied all curricular requirements, have also defended an original dissertation in the final degree
examination.
The change of the degree name from "laurea specialistica" into "laurea magistrale" was settled in 2004.
A limited number of 2nd cycle programmes, precisely those leading to professions regulated by EU sector directives (in dentistry,
human medicine, pharmacy, veterinary medicine, architecture), are defined "one long cycle degree programmes" ("corsi di laurea
specialistica/corsi di laurea magistrale a ciclo unico"); they differ from the majority of usual "corsi di laurea specialistica/corsi di
laurea magistrale" in the
following characteristic features: access is by the Italian school leaving diploma or a foreign comparable qualification; admission is
always subject to entrance exams; curricula consist of just one long cycle of 5-6 years (at present, only the "corsi di laurea
specialistica/corsi di laurea magistrale a ciclo unico" in medicine takes 6 years), and a total number of 300-360 credits.
All "corsi di laurea specialistica/corsi di laurea magistrale" and "corsi di laurea specialistica/corsi di laurea magistrale a ciclo unico"
allow transition to the labour market, access to the civil service and/or regulated professions; they also grant access to research
doctorate programmes as well as to all other degree courses of the 3rd cycle.

B) "Corsi di Master Universitario di 1° livello" consist in advanced scientific courses or higher continuing education studies, open
to the holders of a "laurea" or a foreign comparable degree; admission may be subject to additional conditions. Course length is
min. 1 year.
The degree 1st level University Master is awarded to graduates who have earned 60 credits at least. The 1st level University Master
does not give access to Research Doctorate programmes nor to other 3rd cycle degrees.

Third cycle. It covers the following typologies of degree courses:
A) "Dottorato di Ricerca";
B) "Corsi di Specializzazione";
C) "Corsi di Master Universitario di 2° livello".

A) "Dottorato di Ricerca" aims at training postgraduates for very advanced scientific research or for professional appointments of the highest consequence; they envisage the use of suitable teaching methodologies such as updated technologies, study periods abroad, stages in specialist research centres. Access is by an Italian 2nd degree or a foreign comparable degree; admission is subject to passing of very competitive exams; legal length must be min. 3 years; the drawing up of an original dissertation is necessary to be awarded the 3rd degree called "Dottorato di Ricerca"; the corresponding personal title is "Dottore di Ricerca".

B) "Corsi di Specializzazione" are devised to provide postgraduates with knowledge and abilities as requested in the practice of highly qualifying professions; the majority of them concerns medical, clinical and surgical specialities, but Specialization courses have been also established for the advanced education and professional training of lawyers, magistrates, and teachers. Specialization courses may be established exclusively in application of specific Italian laws or EU directives. Access is by a "laurea specialistica/laurea magistrale" or by a foreign comparable degree; admission is subject to passing a competitive examination; course length is min. 2 years.
The final degree, called "Diploma di Specializzazione", give the right to the title as "Specialista".

C) "Corsi di Master Universitario di 2° livello" consist in advanced scientific courses or higher continuing education studies, open to the holders of a "laurea specialistica/laurea magistrale" or a foreign comparable degree; admission may be subject to additional conditions. Course lengthis min. 1 year. The degree 2nd level University Master is awarded to postgraduates who have earned 60 credits at least.

Credits: degree courses are structured in credits (crediti formativi universitari - CFU). A university credit generally corresponds to 25 hours of global work per student, time for personal study included. The average workload of a full time student is conventionally fixed at 60 credits/year.

Classes of Degree Courses: all "corsi di laurea" and "corsi di laurea specialistica/corsi di laurea magistrale" sharing the same educational objectives and the same fundamental types of teaching-learning activities are organised in groups called "classes of degree courses". The content of individual degree courses is autonomously determined by universities; however, when establishing a "corso di laurea" or a "corso di laurea specialistica/corso di laurea magistrale", individual institutions have to include some general requirements fixed at national level. Degrees belonging to the same class have the same legal validity.

Academic Titles: the latest university legislation has defined the academic titles corresponding to the degrees of the Bologna process. The "laurea" entitles to be called "Dottore", the "laurea specialistica/laurea magistrale" entitles to be called "Dottore Magistrale", the "Dottorato di ricerca" entitles to be called "Dottore di Ricerca".

Joint Degrees: Italian universities are allowed to establish all the degree programmes in cooperation with foreign partner universities, both European and non-European; they may therefore design integrated curricula on completion of which joint or double/multiple degrees are granted.