Scuola Superiore Sant'Anna
di Studi Universitari e di Perfezionamento

Università di Pisa

Master Program /Laurea Magistrale in Computer Science and Networking

September 17, 2012

Start up academic year 2012-13

Welcome

- This speech: a short introduction for the Master Program start up, 4th edition
- Organizational matters, information, comments and recommendations

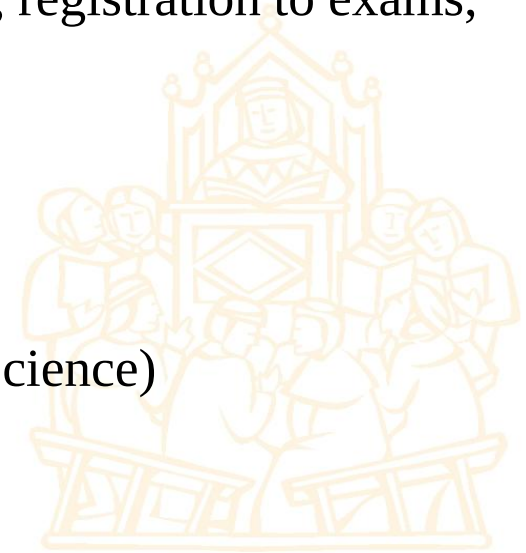
Information

- Official page of the Master Program (WIN)

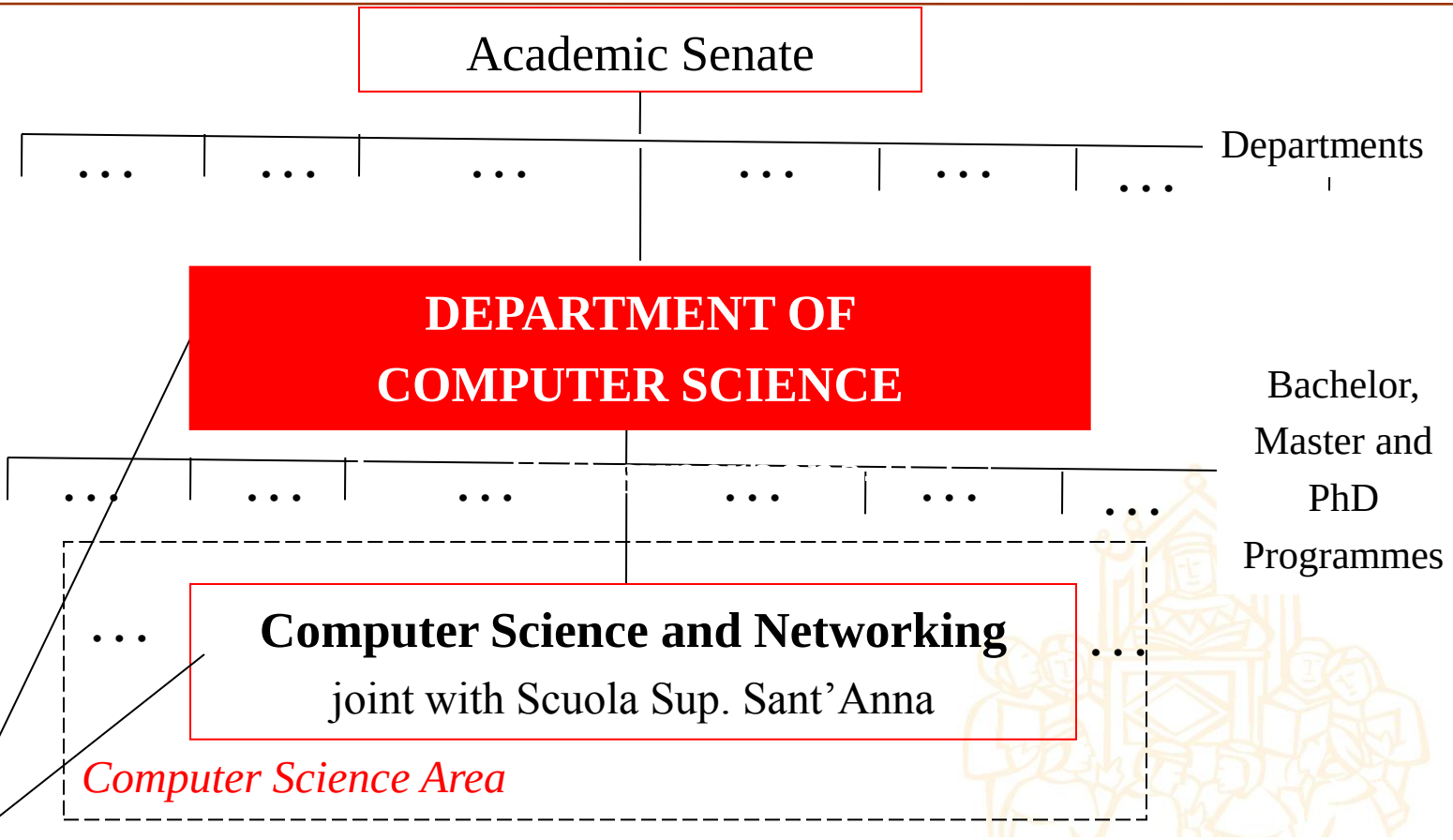
  http://compass2.di.unipi.it/didattica/win18

  – news, enrollment, persons, courses, calendar, timetable, graduation, documents and regultaion, …, management, registration to exams, …

- WIN Office Secretary:
  – **Rosie Mongini** (Department of Computer Science)
  – **Claudio Manfroni** (Sant'Anna)



University of Pisa



- ***Administrative and management responsibility****: didactic plans and rules, students careers.*
- ***Sant'Anna*** *is the peer partner in the didactic and scientific management.*
- *Joint Title of Master in Computer Science and Networking.*

Structure of Master Program

1 credit (ECTS or CFU) = 25 total hours, of which 8 hours of whole class teaching

FIRST YEAR – all mandatory activities – total 57 ECTS

Algorithm Engineering	9 ECTS	2nd semester
Network Configuration and Management	9 ECTS	annual
Advanced Programming	9 ECTS	1st semester
Fundamentals of Signals, Systems and Networks	12 ECTS	annual
High Performance Computing	9 ECTS	1st semester
Teletraffic Engineering	9 ECTS	2nd semester

SECOND YEAR – total 63 ECTS

Mandatory activities:

Distributed Systems: Paradigms and Models	9 ECTS	1st semester
Software Service Engineering	9 ECTS	1st semester

4 subsidiary courses (including the so-called 'free-choice' exam) to be selected for the **2nd year** (**Study Plan**), according to two study plan schemes:

1. more oriented towards distributed applications and networking architectures
2. more oriented towards optical communication and networking infrastructures

Information on courses, syllabus, and study plans

- http://compass2.di.unipi.it/didattica/win18/corsi
- **Study Plan**: to be presented at the end of 2nd semester of 1st year (end of May 2013)
  - when the student will have acquired basic knowledge in the various areas and disciplines
- **During the 1st year, *only mandatory exams* are permitted.**

Exams regulation

- **Written**, or **oral**, or **written + oral**, or **project + oral**
- **Midterms** (intermediate tests): if sufficient rating, they replace the written exam
  - Two official periods in 1st semester (no lectures during these days):
    - November 2, 3, 4
    - December 19, 20, 21 (end of semester)
- **6** '**APPELLI**': 2 in January-February, 3 in June-July, 1 in September, if no midterms are provided
- **5** '**APPELLI**': 2 in January-February, 2 in June-July, 1 in September, if midterms are provided
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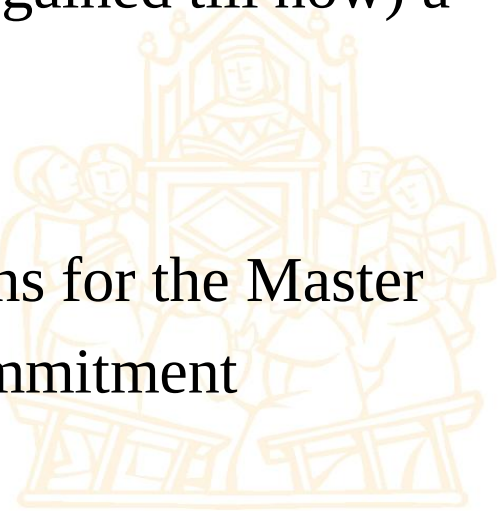
Approach to this Master Program

- High quality education and training
- Exploit the "small class" (*numero programmato*) feature at best
  - achieving the quality goal in a *productive and pleasant* way
- Professors and students must gain (have gained till now) a collaborative *modus operandi*
  - solving problems together
- This has been one of the main motivations for the Master Program definition, and my personal commitment



Management of Master Program

Master Board (*Consiglio di Corso di Laurea*)**:**

- All professors and assistant researchers
- Representatives of students (formally elected): currently
  - Daniele De Sensi, end of 2nd year
  - Simone Giuliani, end of 2nd year
  - Francesca Pacini, end of 2nd year
  - Roberto Ladu, beginning of 2nd year

Recommendation: choose three new representatives asap.
They will be invited to the Master Board meetings, awaiting their formal elections.

- Didactic Committee *(Commissione didattica)*:
  - 4 students , 4 professors + President of Master Board

Acknowledgements

- All the actions and solutions to improve the schemes, syllabus, prerequisites, and so on,

  have been discussed and implemented with the fundamental contribution of the **students and their representatives.**

- *Since the beginning, their participation to the organization of this Master Program has been of invaluable importance.*

Background and prerequisites

- One of the most important results of the joint Didactic Committee has been the great **improvement of course contents** and the **regularization of prerequisites** for each course.
- Different input background of students (Computer Science / Engineering, University of Pisa / other Italian Universities / foreign Universities, …).
- Now, the structly necessary prerequisites of **every** course are provided by other courses and/or by the initial part of the courses themselves (*no pre-courses*).
- However, **each students is strongly recommended to individuate possible lacks and deficiencies in his/her background,**
- and to discuss such problems with the lecturers and the President.
- **Precedences between exams** are an important issue for the student success.

Approach to exam management and quality of the Master Program

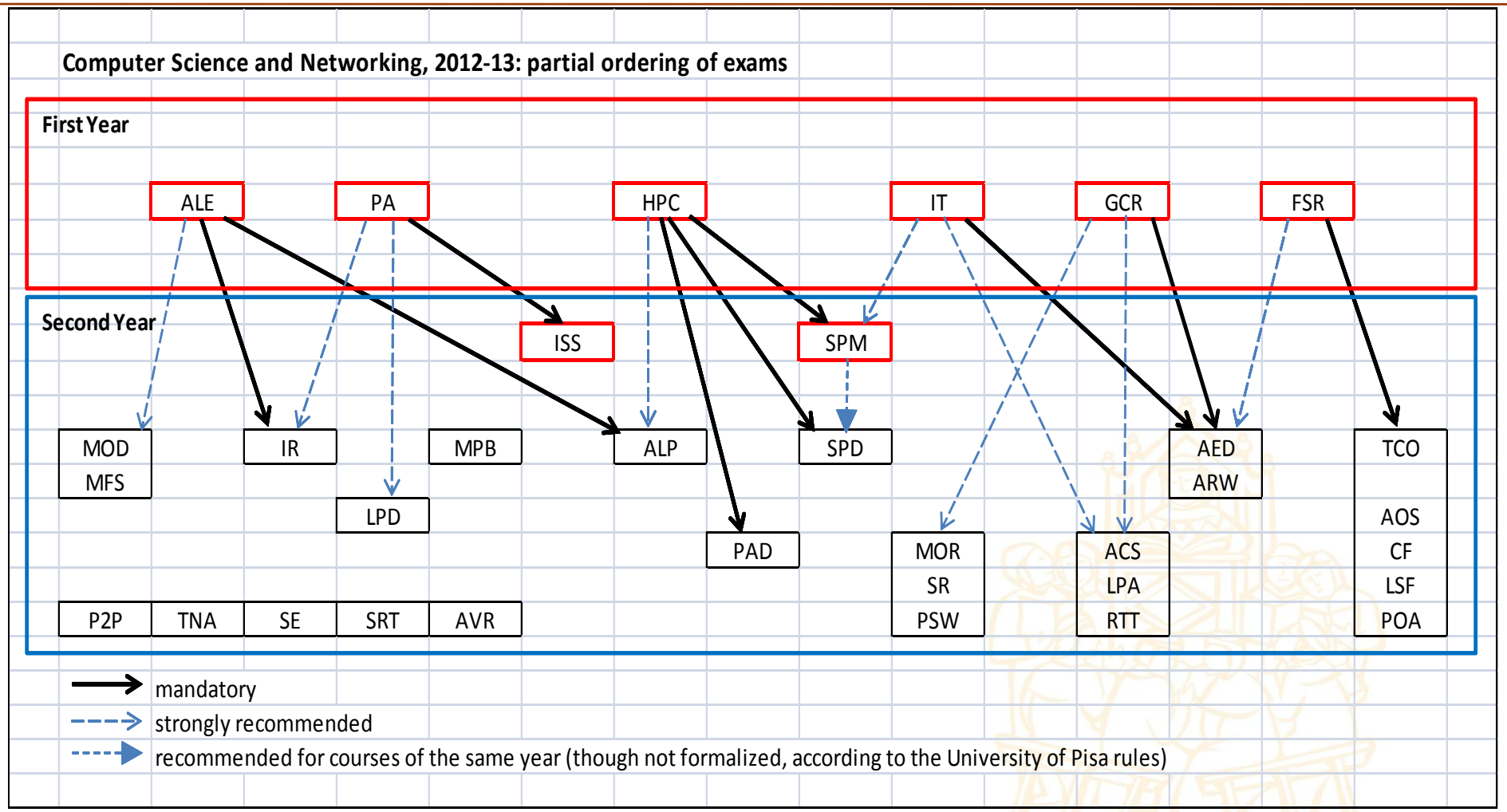
- In principle, all the exams of 1st year should be passed before the exams of the 2nd year can be taken, and the mandatory exams should precede the subsidiary ones.
- **According to the experience of the past editions, we have verified that anticipating subsidiary exams, and/or trying to postpone mandatory exams of 1st year, is very dangerous.**
- The Didactic Committee has studied pros/cons of the 'rigid precedence' approach above, with the goal of achieving *high quality + acceptable student conditions*.
- The final proposal is **to strongly recommend** such approach, + a **partial ordering** of precedences.

Follow the recommendation

- *There is no reason for an approach different from the recommended one*, e.g. interest for some specific courses, or respecting the conditons for DSU support.

- At the end of 1st year every student will receive a formal judgement from the Master Board about his/her curriculum and probability of success.

Partial ordering



Courses and acronyms

ACS	Networking architectures, components and services	9
AED	Packet-switching and processing architectures	6
ALE	Algorithm Engineering	9
ALP	Parallel and distributed algorithms	6
AOS	Optical amplification and sensing	9
ARW	Architectural and design issues of wireless networks	6
AVR	Networked virtual environments	6
CF	Photonic switching	9
FSR	Fundamentals of Signals, Systems and Networks	12
GCR	Network Configuration and Management	9
HPC	High Performance Computing	9
IR	Information retrieval	6
ISS	Software Service Engineering	9
IT	Teletraffic Engineering	9
LPA	Laboratory of routing protocols and architectures	6
LPD	Laboratory of distributed software design	6
LSF	Laboratory of photonic systems	6

Courses and acronyms

MFS	Formal methods for security	6
MOD	Models of computation	9
MOR	Network optimization methods	6
MPB	Methods for the specification and verification of business proce	6
P2P	Peer to peer systems	6
PA	Advanced Programming	9
PAD	Distributed enabling platforms	6
POA	Applied Optics and Propagation	6
PSW	Security issues in web applications	6
RTT	Networks and technologies for telecommunications	9
SE	Embedded systems	6
SPD	Programming tools for parallel and distributed systems	6
SPM	Distributed Systems: Paradigms and Models	9
SR	Network security	9
SRT	Real time systems	6
TCO	Theory and techniques of optical communications	9
TNA	Numerical techniques for applications	6


good luck
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