More Information

For more information on the study program consult

◆ postgrau.lsi.upc.edu/mcomp

Application

Enter the UPC application utility accessible from:

◆www.upc.edu/preinscription/

fill out the electronic form and upload the required documents. Applications will be evaluated by the Academic Commission of the program. Applicants will be notified about their acceptance or rejection.

Contact

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If you have any further questions feel free to contact us at any time.

**Departament de Llenguatges i Sistemes Informàtics
Software Department**

Master and PhD
in Computing

**Technical University of Catalonia
BARCELONA TECH**

Objectives

Education is a social added value that enables people to play an active role in a world of economic globalization, rapidly evolving technology and competitive job market. In this scenario, higher education must be grounded on a body of lasting knowledge that can be easily adapted to a continuously changing reality.

The Postgraduate program offers high-quality education in various areas of Computer Science and Engineering, leading to the Master and PhD degrees. The program provides students a solid background, expands the knowledge in specialized disciplines and sows the seed for long-term professional excellence.

The Master program prepares the students to start qualified careers in industry or continue their education in a PhD program. The Master's thesis offers an opportunity to apply the attained knowledge and skills for solving a challenging problem in the students' preferred area of specialization.

The PhD program provides an opportunity for young researchers to pursue a doctorate, conduct innovative research, and further the frontier of knowledge in theoretical and practical aspects of Computer Science.

Course Structure

Master Degree   120 ECTS

Basic Courses
60 ECTS shared with other UPC degrees. Depending on previous background students could obtain recognition for some of those courses.

Specialization courses
24-30 ECTS associated to the specialization areas. Optionally 6ECTS of traversal research skills.

Master Thesis
30 ECTS of work which involves a certain technological difficulty. The work could be either professional or research oriented.

PhD Program

Teaching phase
Up to 60 ECTS included in the Master in Computing , depending on access degree and previous background, combined with research oriented courses or activities.

Research phase
Work towards a PhD Thesis. A thesis project must be presented by the end of the second academic year

Specialization Areas

Algorithms and Programming

Ability to design reliable algorithms for computationally complex problem in different areas: bioinformatics, game theory, learning and data mining, VLSI systems, distributed environments, etc.

Information Systems
Advanced topics in the development process of information systems, with emphasis in software engineering, conceptual modeling, data bases, enterprise applications, etc.

Visualization Virtual Reality and Graphic Interaction
Knowledge for the modeling and/or treatment of geometric and volumetric data, as well as, the management, manipulation and navigation of highly complex geometric systems presents in engineering applications.

Quality

The PhD program has got and kept the quality mention of the Spanish Ministry of Education since 2003, MCD2003-00130.

The PhD and the Master in Computing programs have been approved by the Spanish Ministry of Education in accordance with the directives issued by the European Higher Education Area (EHEA).

Support

The research program is supported by the following UPC research groups:

ALBCOM: Algorithms, Bioinformatics, Complexity and Formal Methods

GESSI: Software Engineering for Information Systems research group

GIE: Computer Science in Engineering

LARCA: Laboratory of Relational Algorithmics, Complexity and Learnability

LOGPROG: Logic and Programming

MOVING: Research Group on Modelling, Interaction and Visualization in Virtual Reality

MPI: Information Modelling and Processing

Study Requirements

Bachelor/Master in Computer Science or equivalent official degree.
To access directly the PhD program research phase the Master Studies should have been completed with a research oriented Master Thesis.

Knowledge of English