The Department of Computer Architecture (DAC) at the Universitat Politècnica de Catalunya (UPC) has a solid and diverse knowledge base. More than 45 professors work on a wide range of research areas, from micro-architecture to multimedia applications, and from network analysis to the design of parallel applications.

Master Degree in Computer Architecture, Networks and Systems (CANS)

CANS is a research oriented master degree course taught at the DAC. More than 30 different subjects are offered to students with the aim of them achieving proficiency in the areas of expertise of the DAC's researchers.

Erasmus Mundus Master Degree in Distributed Computing (EMDC)

The EMDC aims at giving the best possible foundation for a career in research and development of scalable and reliable distributed systems. The first two semesters are taught at UPC, the third at KTH, and the fourth at either KTH or UPC.

PhD in Computer Architecture and Technology

More than 80 students are currently enrolled in this program, and more than 40 PhD theses have been presented over the past five years.

The quality of the DAC's programs

A substantial number of publications in international journals and conferences attests to the quality of the research carried out at the DAC. Both master's degree and the PhD program have been officially approved by the Spanish Ministry of Science and Innovation. The PhD program has received the Quality Award (MCD200300126), from the Ministry of Science and Innovation, yearly since 2003.

Contact details:

Master's Degree in Computer Architecture, Networks and Systems (CANS)

http://www.ac.upc.edu/cans
mastercans@ac.upc.edu

Erasmus Mundus Master Degree in Distributed Computing (EMDC)

http://www.ac.upc.edu/emdc
masteremdc@ac.upc.edu

PhD in Computer Architecture and Technology

http://www.ac.upc.edu/phd
phd@ac.upc.edu

How to get to our campus:

http://www.ac.upc.edu/location

Address

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Research groups

ANA - Next generation network architectures and protocols, e-health and design of real-time applications and services.
http://research.ac.upc.edu/ANA

ARCO - Microarchitectures and compilers for future processors. Technology and energy-aware processor design.
http://research.ac.upc.edu/ARCO

CAP - Microarchitectures for top-end and embedded processors. Parallel systems and applications. Operating systems.
http://research.ac.upc.edu/CAP

http://research.ac.upc.edu/CBA

http://research.ac.upc.edu/CNDS

DAMA-UPC - Data quality. Record linkage. Data exploration. Graph mining. Relational engine and optimization design. Distributed data management.
http://research.ac.upc.edu/DAMA-UPC

DMAG - Secure creation, management, distribution, search and retrieval of multimedia content. Metadata semantics and interoperability. Digital management of rights.
http://research.ac.upc.edu/DMAG

ICARUS: The group works on Unmanned Aircraft Systems research and on secure and environment friendly Air Traffic Management.
http://research.ac.upc.edu/ICARUS

How to get a master's degree and/or a PhD

Our CANS master degree involves taking courses worth 90 ECTS (European Credit Transfer System) credits, and writing a master's thesis worth an additional 30 ECTS credits (a total of 120 ECTS credits).

Candidates are admitted on the basis of their academic profiles and CVs. Please register at http://www.ac.upc.edu/cans

The EMDC master comprises three semesters of course work and one semester for thesis work, 120 ECTS in total. The first year of studies, 60 ECTS, is carried out at one of the two optional entry locations, IST and UPC. The third semester of studies will be carried out at KTH, 30 ECTS. Students will then prepare their master thesis at one of the participant institutions, 30 ECTS.

Students from any country are welcome to apply. A number of Erasmus Mundus scholarships are available.
http://www.ac.upc.edu/emdc

To apply for our PhD program, a state regulated master's degree is required. After PhD candidates have passed the research stage, they are allowed to defend their PhD theses.

Candidates are admitted on the basis of their academic profiles, CVs and research interests.
http://www.ac.upc.edu/phd

International relations

International relations and worldwide recognition are two of the most important achievements of the DAC. Our professors collaborate with top universities worldwide, belong to multiple networks of excellence, and are involved in international research projects. Renowned professors visit us frequently to teach PhD and master's degree seminars and courses, or to spend sabbatical periods on our premises.

Collaboration with companies

The good relations of the DAC with multinational companies have a long tradition; in fact, research support centers of companies such as IBM and Intel are located on campus. The Department also obtains a substantial amount of funding from public administrations, the EU, and local companies.

Collaboration with research centers

The DAC's researchers are active in the fields of microprocessor design-networks and supercomputing, among others, at the following research centers:

- BSC-CNS www.bsc.es
- esCERT www.escert.upc.edu
- CCABA www.cccaba.upc.edu
- DAMA-UPC www.dama.upc.edu
- Intel-UPC Labs www.intel.com/barcelona