Master's degree in Informatics Engineering

The master's degree in Informatics Engineering trains students to become professionals who can give support within any kind of organisation or as part of companies that are involved in or directly provide advanced digital services. Informatics covers a wide range of disciplines, including the design of hardware and software and the services that make these useful for society. Indeed, social and economic progress cannot be understood without taking into account the role played by informatics in all spheres of society.

GENERAL DETAILS

Duration and start date
1.5 academic years, 90 ECTS credits. Starting September and February

Timetable and delivery
Afternoons. Face-to-face

Fees and grants
Approximate fees for the master's degree, excluding degree certificate fee, €3,975 (€5,963 for non-EU residents).
More information about fees and payment options
More information about grants and loans

Language of instruction
Subjects will be taught in Catalan or Spanish, depending on the student's level of comprehension and on the teaching objectives of the master's degree course.

Location
Barcelona School of Informatics (FIB)

Official degree
Recorded in the Ministry of Education's degree register

ADMISSION

General requirements
Academic requirements for admission to master's degrees

Places
50

Pre-enrolment
Pre-enrolment closed (consult the new pre-enrolment periods in the academic calendar).
How to pre-enrol

Enrolment
How to enrol

Legalisation of foreign documents
All documents issued in non-EU countries must be legalised and bear the corresponding apostille.

DOUBLE-DEGREE AGREEMENTS

Double-degree pathways with foreign universities
Master's degree in Informatics Engineering (MEI) + Master's degree in Informatics- Mention in Computer Science or Mention in Software Engineering (Pontificia Universidad Católica del Perú, PUCP)

Master's degree in Informatics Engineering (MEI) + Ingénieur ISIMA (Institut Supérieur d’Informatique, de Modélisation et de leurs Applications (Grande Ecole francesa, ISIMA), Université Blaise Pascal

PROFESSIONAL OPPORTUNITIES

Professional opportunities

Information systems managers
They are involved in the strategic decisions that affect information systems, ensure that communication flows between technological and business departments, take responsibility for projects to implement applications, set up technological infrastructure, draw up budgets and manage human resources in their departments.

Development managers
They are responsible for the development of applications, supervise one or more project managers, speak to users through their project managers, and devise technical and quality policies.

Production and operations managers
They are responsible for technology infrastructure and platforms, manage budgets, guarantee the availability of information systems, work in close collaboration with the development department to accurately forecast the IT infrastructure that may be required, and ensure that new applications are properly implemented in systems.

Heads of IT
They carry out most of the tasks described above in small- and medium-sized businesses. They draw up a business’s systems plan, organize the IT department (equipment, programs and human resources) and work in coordination with the rest of the departments in the company.

Project managers
They are responsible for the overall management of projects in terms of technical specifications, financing and deadlines, interact with users, take part in user training programmes and oversee the implementation of applications.

Functional analysts
They take part in the functional analysis of users’ needs, draw up technical specifications and take responsibility for the development of applications.

Heads of department
They ensure the coherence and progress of all IT projects, manage the deployment of new applications and their maintenance, and supervise teams of project managers, functional analysts, etc.

Consultants
They work for consultancies and/or business advisory services that assess the functional and/or technical needs of their clients, and they set up customized programs and training sessions for users.

Database architects
They devise, develop and integrate a company’s database.

Heads of quality, methods and procedures
They define and implement development standards, coordinate development teams, define quality indicators and their implementation, and put testing and quality control procedures in place.

Systems architects
They devise the technical and functional architecture of information systems.

Competencies

Generic competencies
Generic competencies are the skills that graduates acquire regardless of the specific course or field of study. The generic competencies established by the UPC are capacity for innovation and entrepreneurship, sustainability and social commitment, knowledge of a foreign language (preferably English), teamwork and proper use of information resources.
ORGANISATION

UPC school
Barcelona School of Informatics (FIB)

Academic coordinator
Daniel Jiménez González

Academic calendar
General academic calendar for bachelor's, master's and doctoral degrees courses

Academic regulations
Academic regulations for master's degree courses at the UPC

CURRICULUM

Subjects | ECTS credits | Type
---|---|---
**FIRST SEMESTER**
Business Integration of Information Systems | 3 | Optional
Computing and Intelligent Systems | 6 | Compulsory
Efqm and Quality Management | 1.5 | Optional
Embedded and Ubiquous Systems | 6 | Compulsory
High Performance Computer Architecture | 6 | Compulsory
Incorporating the Know-How into the Decision Process | 1.5 | Optional
Interactive Graphic Systems | 6 | Compulsory
Interfaces and Accessibility | 3 | Optional
Realistic Animation of Articulated Bodies | 3 | Optional
Sustainability, Economy and Social Commitment | 1.5 | Optional
Techniques and Tools for Bioinformatics | 3 | Optional

**SECOND SEMESTER**
Cloud Computing | 3 | Optional
Computer Games | 3 | Optional
Data Mining Techniques | 3 | Optional
Development and Management of Information Systems | 6 | Compulsory
Digital Identity | 3 | Optional
Financing for Innovative Business Projects | 1.5 | Optional
Informatic Technologies for Automation | 3 | Optional
Internet of Things | 3 | Optional
Internet, Security and Multimedia Contents Distribution | 6 | Compulsory
Programming of Cell Phones and Mobile Autonomous Devices | 3 | Optional
Software Development for Geographic Ans Spacial Information | 3 | Optional
Strategic Planning and IT Governance | 4.5 | Compulsory
Viability of Innovative Business Projects | 4.5 | Compulsory
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<thead>
<tr>
<th>Subjects</th>
<th>ECTS credits</th>
<th>Type</th>
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<tbody>
<tr>
<td><strong>THIRD SEMESTER</strong></td>
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<tr>
<td>Master's Thesis</td>
<td>30</td>
<td>Project</td>
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