Master in Informatics Engineering (MEI)

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Vice-dean of Postgraduate Studies

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FIB

FIB:
Facultat d'Informàtica de Barcelona

Universitat Politècnica de Catalunya (UPC-Barcelona**Tech**)

About UPC

Universitat Politècnica de Catalunya (UPC-BarcelonaTech) is a public higher education and research institution that is specialised in the fields of architecture, science and engineering and one of the leading technical universities in Europe.

Every year, more than 6,000 bachelor's and master's students and more than 500 doctoral students graduate.

UPC values:

Social responsibility   *Sustainability*   *Equal opportunities*   *Cooperation and solidarity*

About FIB

The Facultat d'Informàtica de Barcelona (Barcelona School of Informatics) belongs to UPC and it is the reference centre for Informatics studies since its inception in 1976, and the beginning of the educational activities during 1977-1978.

Throughout these 40 years, the faculty has been in charge of the bachelor's degree, diploma courses, technical engineering and master degrees and currently the formal qualifications in the field of Computer Science and related subjects.

FIB: Where?
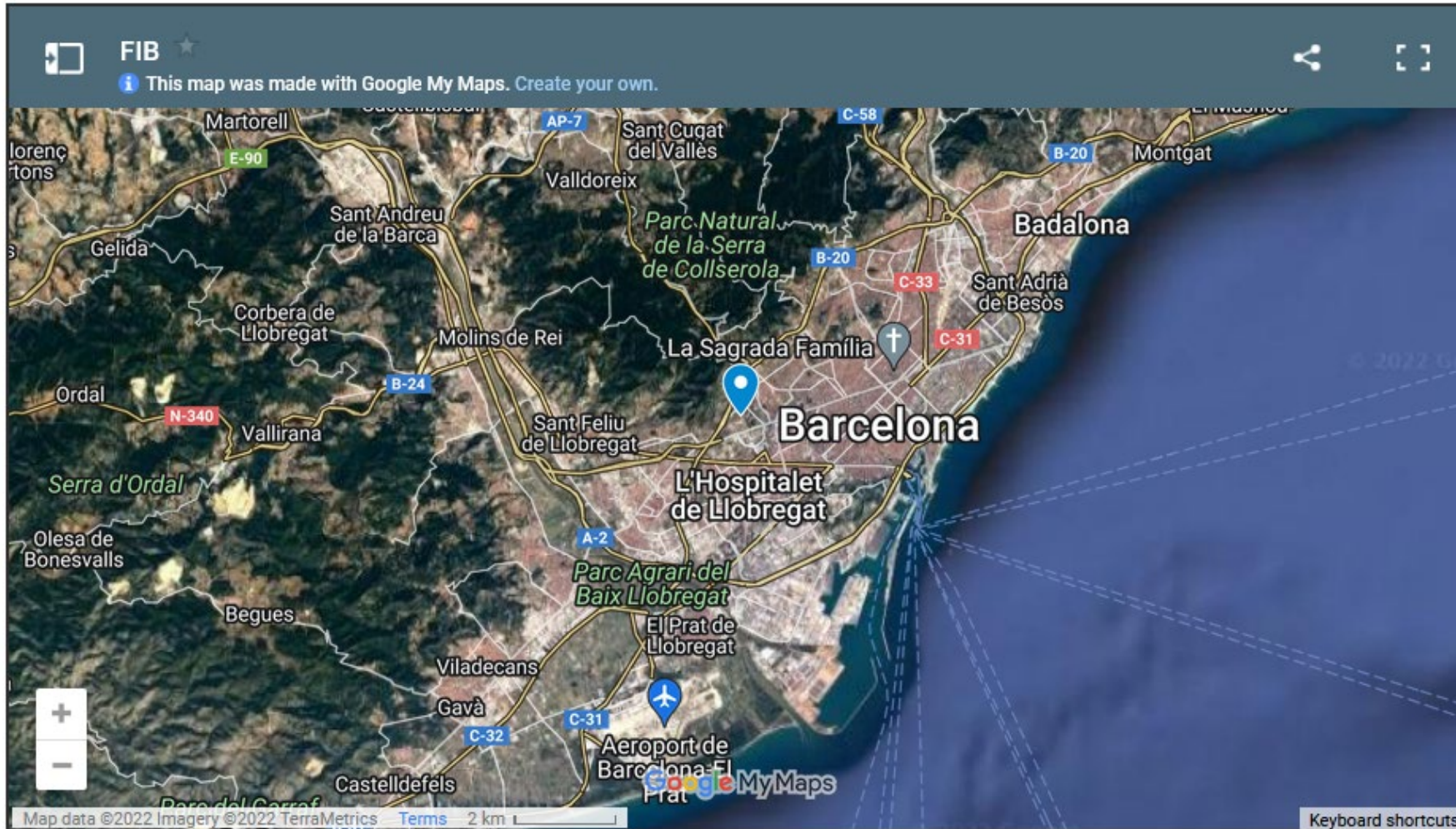
Address
B6 Building at Campus Nord
Jordi Girona street,1-3
08034 Barcelona

Contact
Email: fib.info.masters@upc.edu

Web: http://www.fib.upc.edu/

Social Networking
https://www.facebook.com/fib.upc
https://twitter.com/fib_upc
https://www.youtube.com/user/mediafib
https://www.instagram.com/fib.upc/

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FIB: Why?

- It is one of the top 10 computer science schools in Europe. We have the resources, professors and experience to offer a wide range of high-value courses

- It is a pioneering school at university-level in Informatics in Spain and has been spearheading Catalonia's progress in the field since 1977. Its contribution to society can clearly be seen in the number of top-quality professionals it has produced, who are required by organizations that seek to innovate and make progress

- Excellence quality certified by external and independent quality agencies

For more details about UPC and FIB check our generic presentation about our https://masters.fib.upc.edu/masters/master-informatics-engineering. Check our general information session **presentation** and **video** of 2024

- Professionals who have the skills to implement ICTs in all types of companies and organizations

- Professionals who can lead R&D departments and projects with a substantial research component

- Graduate employment rate of practically 100% and salaries among the highest for university graduates

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Master in Informatics Engineering

Summary

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MEI: Master in Informatics Engineering

The master's degree equips graduates with knowledge and hands-on experience across a wide spectrum of information technology domains: from cloud computing to security and from computer graphics to information systems, with a focus on IT management and leadership.

Graduates become the "Swiss Army knife" of IT in their organizations.

- This degree is equivalent to the former *Enginyer en Informàtica*

- Accreditations: EQUAINE, AQU-Excellence

- Language: Spanish / Catalan (B2)
  - Some courses are taught in Catalan and some in Spanish
  - Support to Spanish-speaking students to learn basic Catalan to follow the lectures

- 90 ECTS: 1.5 years – Strong professional orientation
  - 45 Compulsory (36 IT , 9 Management)
  - 15 Elective (3 ECTS on Management)
  - 30 Master thesis

- Industrial Agreements – Curricular Internships, Professional Experience (elective ECTS)
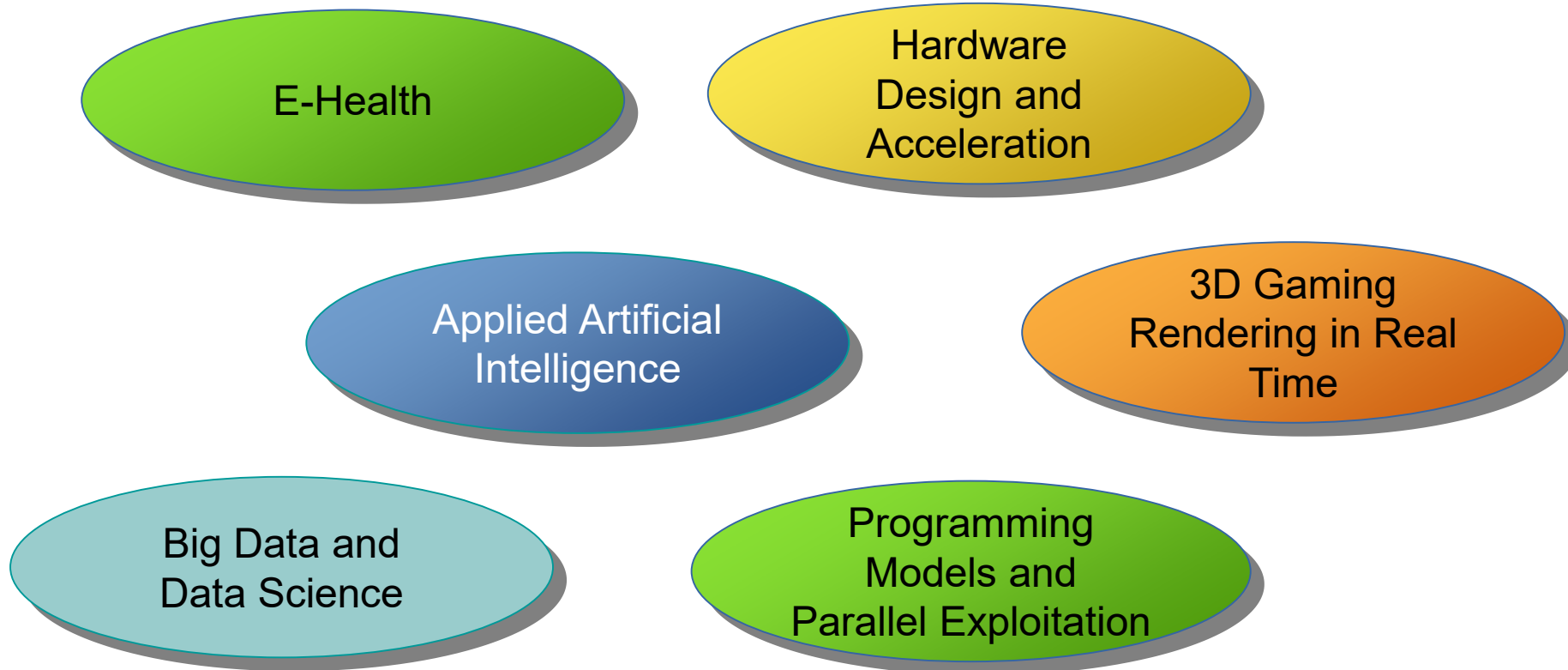
- Complementary courses might be required

https://masters.fib.upc.edu/masters/master-informatics-engineering

MEI

- Recommended MEI path:

Q1	Business & Management (6)	Information Technology (24)
Q2	Business & Management (6)	Information Technology (24)
Q3	Master Thesis (30)	
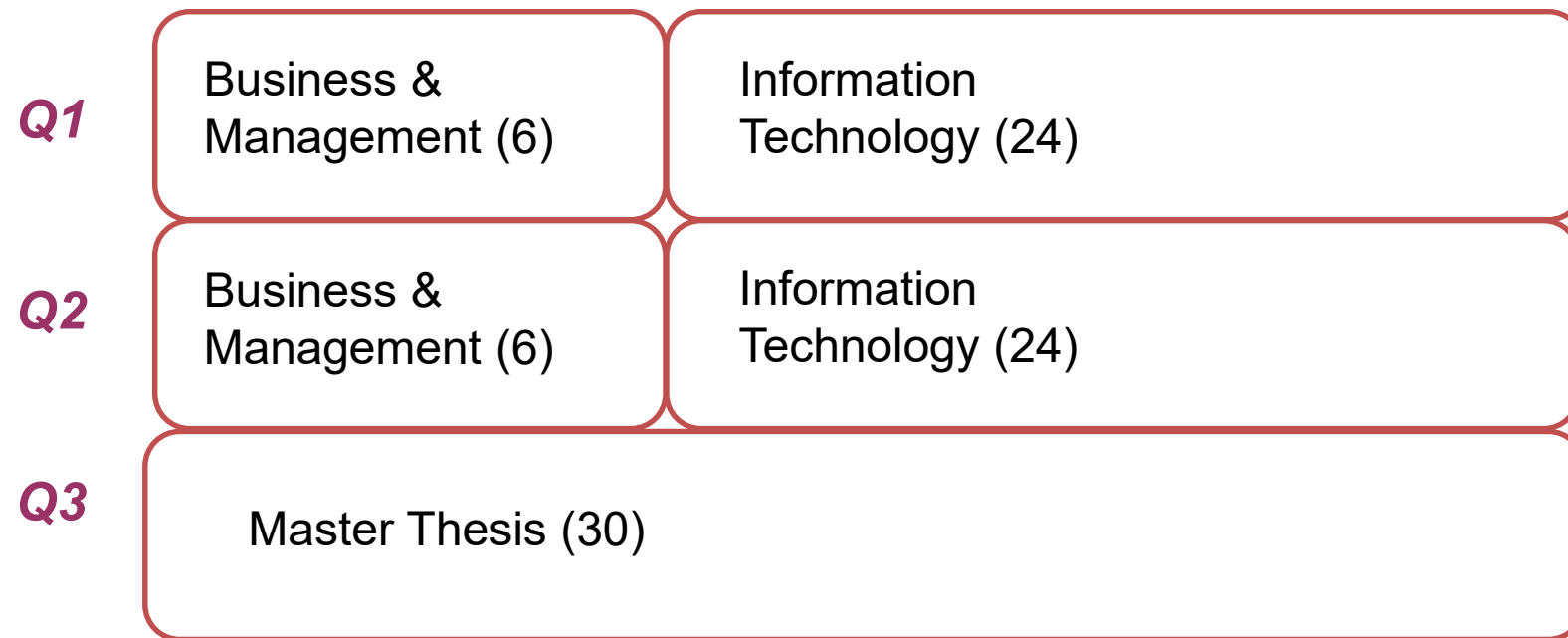
Note: <u>Not</u> all courses are offered at every semester. Plan well ahead!

Social and Technological Challenges

E-Health

Hardware Design and Acceleration

Applied Artificial Intelligence

3D Gaming Rendering in Real Time

Big Data and Data Science

Programming Models and Parallel Exploitation

TECHNOLOGY TRANSFER
RESEARCH + DEVELOPMENT + INNOVATION

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Employment Perspectives

- Software Engineering Companies
- Companies in the field of Artificial Intelligence / Data Science
- Internet and Multimedia Security Companies
- Video Games, Virtual and Augmented Reality Companies
- Companies in the Embedded field, Mobile Devices, Industry 4.0, 3D Printers, Computers, etc.
- Sustainable Companies!

+ Training to manage team projects, to start innovation and entrepreneurship projects, study the feasibility of launching a product or create spin-offs... Naturally oriented to become a CIO

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Master Thesis: HPC for Deep Learning

- *Title*: Study of Deep Learning Algorithms Scalability in High Performance Computer Infrastructures.
- *Author: Francesc Sastre Cabot*. **Grade: 10 (MH)**
- *Topic*: High Performance Computing and Parallel Techniques to Speed-up Deep Learning
  - Image classification
  - Object Detection, etc.
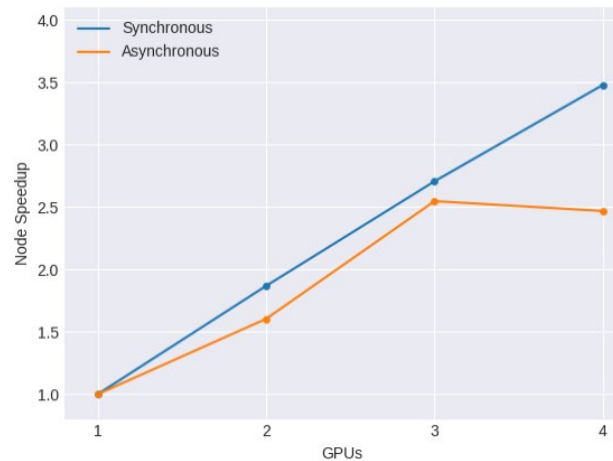
From 106 hours of training to 12 hours...
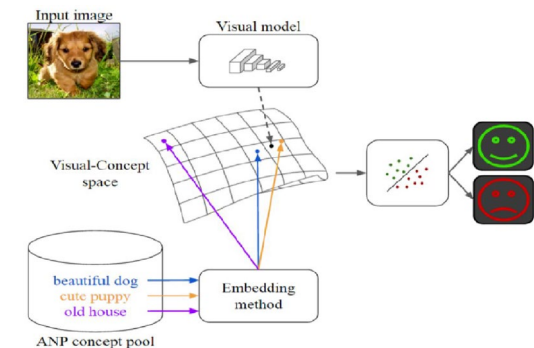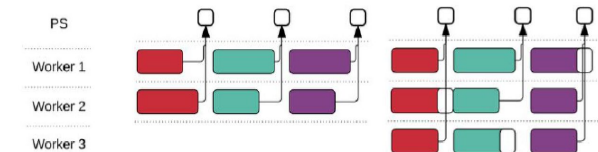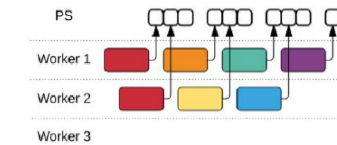
Industrial MEI

Internships

Internships

- *Convenis de col·laboració universitat – empresa (CCE):* *https://www.fib.upc.edu/en/companies/industrial-practices*
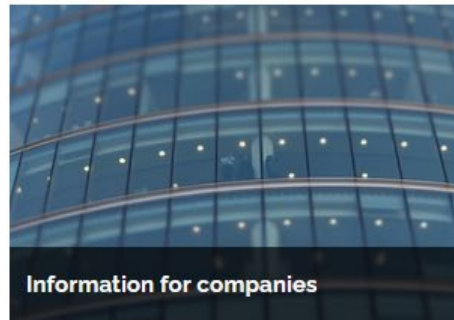
Internships

CCE can be established between companies and FIB

- Curricular Practices:
  - Maximum of 900 hours (without accounting the Master Thesis)
    - For the master thesis, you may account 450 <u>additional</u> hours (i.e., for a total of 1350h)
  - Elective ECTS (minimum 6, maximum 12) [+ Master Thesis ECTS]
  - Master Thesis (Modality B –at a company- or D –at a foreign company-)
  - 30 hours → 1 ECTS

Professional Experience as elective ECTS (via work contract):
- Previous or during the master
- 1600 hours per 6 credit
  - Then, proportional

MEI – Industrial Modality

It is the same as MEI (all information from previous slide holds), but a modality thought for people working part-time at a company or in a CCE

- *Intensive training academic-professional,*
- *Focus on project management and team leadership*

- Students of this modality will achieve their studies in **2 years** with the following dedication:
  - A maximum of 4-5 hours/day dedicated to their studies at FIB,
    - Compact Lecture Schedule: 3 afternoons per week (14:00 to 20:00)
    - The rest of hours are devoted to self-study activities that can be conducted from home
  - Around 5 hours/day dedicated to their formation and work in industry

https://masters.fib.upc.edu/masters/master-informatics-engineering-industrial-modality

MEI Vs. MEI Industrial Modality

	MEI	Industrial MEI	
S1	ACAP, CSI, SEU, SGI, PEGTI +1,5 ECTS (1 management course)	SGI, CSI, PEGTI+SECS +1,5 ECTS (1 management course) 18 ECTS	Internship or working experience
S2	VPEI+FPEI, DGSI, ISDCM +7,5 ECTS (3 elective courses)	VPEI+FPEI, DGSI, ISDCM 18 ECTS	12 elective ECTS Internship or working experience
S3	Master Thesis	SEU, ACAP 12 ECTS	Internship or working experience
S4		Master Thesis (B or D modality)	30 ECTS

ECTS (industrial modality)
- 48 ECTS   FIB
- 42 ECTS   Industry (25/30h = 1 ECTS)

Total: 90 ECTS

Mobility and Internationalisation

Studying Abroad

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Mobility and Internationalisation

Plenty of options! 205 universities in 42 countries

- Study abroad (one semester)
  - Conditions (max ECTS): Master Thesis (30 ECTS)
  - Mobility programs (many with scholarships)
    - Erasmus+
    - Latin America, USA and Canada
    - National Institute of Informatics (NII) Tokyo and Vulcanus in Japan
    - China

- 2 Double degree (two semesters abroad)

- Internship abroad
  - Ever-open calls: Erasmus+, IAESTE, AIESEC, Entrypark
  - Academic institutions
  - Industry

- Other activities (summer schools, short stays…)

>200 requests including bachelor and master students for 2024/2025

MEI students leaving to Buenos Aires, Taiwan, Santiago de Chile and Twente

Double Degrees: PUCP

- Pontificia Universidad Católica de Perú
  - MEI (1st year, 60 ECTS)
    - IT Courses: ACAP, CSI, DGSI, ISDM, SEU, SGI, PEGTI, VPEI
    - B&M Courses: FPEI, SECS
    - + 12 ECTS in elective courses (except for interfaces and accessibility)
  - Maestría en Informàtica con mención en Ciencias de la Computación (60 ECTS)
    - 4 courses + master thesis

The student pays the fees for the second year at PUCP (PUCP price)

https://www.fib.upc.edu/es/movilidad/dobles-titulaciones/escuela-de-posgrado-de-la-pontificia-universidad-catolica-de-peru-pucp

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Double Degrees: ISIMA

- Université Clermont Auvergne (ISIMA)
  - MEI (1st year, 60 ECTS)
    - IT Courses: ACAP, CSI, DGSI, ISDM, SEU, SGI, PEGTI, VPEI
    - B&M Courses: FPEI, SECS
    - + 12 ECTS in elective courses
  - Master of Science in Computer Science (60 ECTS)
    - 10 courses from a pool (3 ECTS each) – *decision science and data science topics*
    - 9 ECTS research project + 21 ECTS internship

The student pays the fees for the second year at UPC (UPC price)

https://www.fib.upc.edu/es/movilidad/dobles-titulaciones/universite-clermont-auvergne

Mobility and Internationalisation

https://www.fib.upc.edu/en/mobility

Mobility and Internationalisation

- Information Sessions: https://www.fib.upc.edu/en/mobility/outgoing/information-sessions

Mobility information session 2023-2024

For mobility stays during the academic year 2024-2025

1st semester

Wednesday, 15 November 2023

In this first session we will inform on the various mobility programs, but we will focus on those whose call is in December-January and on the stays at US universities. Infomation sessions will be recorded.
Place: Sala d'actes Manuel Martí Recober

- Morning session: **12:30 pm**

Necessary prior registration: Register yourself

2nd semester

Wednesday, 14 February 2024

In this second session we will inform on the various mobility programs, but we will focus on Erasmus+,SICUE and double degree calls. Information sessions will be recorded.
Place: Sala Actes del Vèrtex (North Campus)

- Morning session: **12:15 pm**
- Afternoon session: **15:00 pm**

Necessary prior registration: Register yourself

Mobility Presentation 2023-2024 Q1

Mobility Presentation 2023-2024 Q2

Still have doubts?
Contact us at:
fib.rel.int@upc.edu

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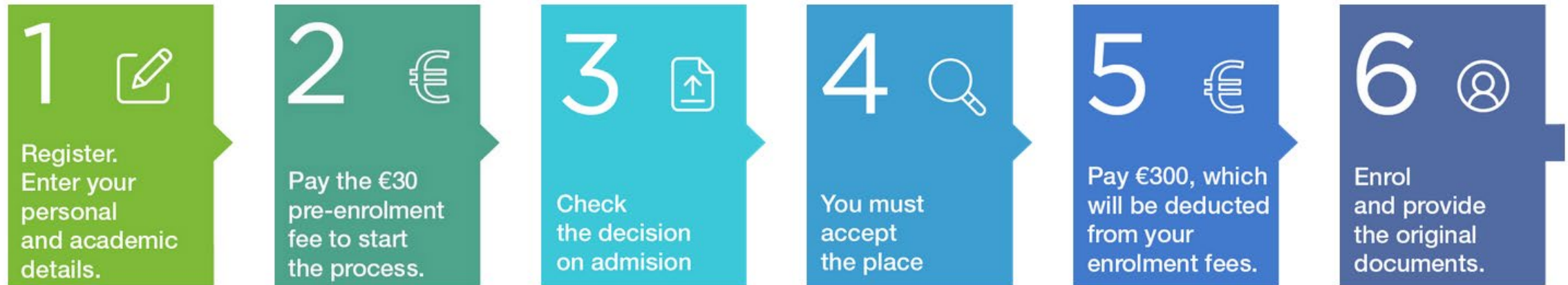
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Enrolment Procedure

Procedure

Interested in one of our masters? This is the procedure to follow

## The admission process, step by step

1 Register. Enter your personal and academic details.

2 Pay the €30 pre-enrolment fee to start the process.

3 Check the decision on admision

4 You must accept the place

5 Pay €300, which will be deducted from your enrolment fees.

6 Enrol and provide the original documents.

https://www.upc.edu/en/masters/access-admission-enrolment

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Important Dates

- Pre-enrolment: From 26th February to 26th May 2024
- Two (three) admission periods:
  - First period:
    - Deadline to apply: 18th April 2024
    - Tentative admission notification: 28th April 2024 (2nd May 2024)
  - Second period:
    - Deadline to apply: 26th May 2024
    - Tentative admission notification: 2nd June 2024 (9th June 2024)
  - *Third period:*
    - *Not guaranteed, only if seats available*
    - *Tentative deadline: 30th June 2024*
    - *Tentative admission notification: 7th July 2024*
- Check the specific website of each master to know about its admission criteria: masters.fib.upc.edu

Pre-enrolment

- Start the procedure from the masters.fib.upc.edu website. Look for your favourite master, scroll down and look for the pre-enrolment button as shown below
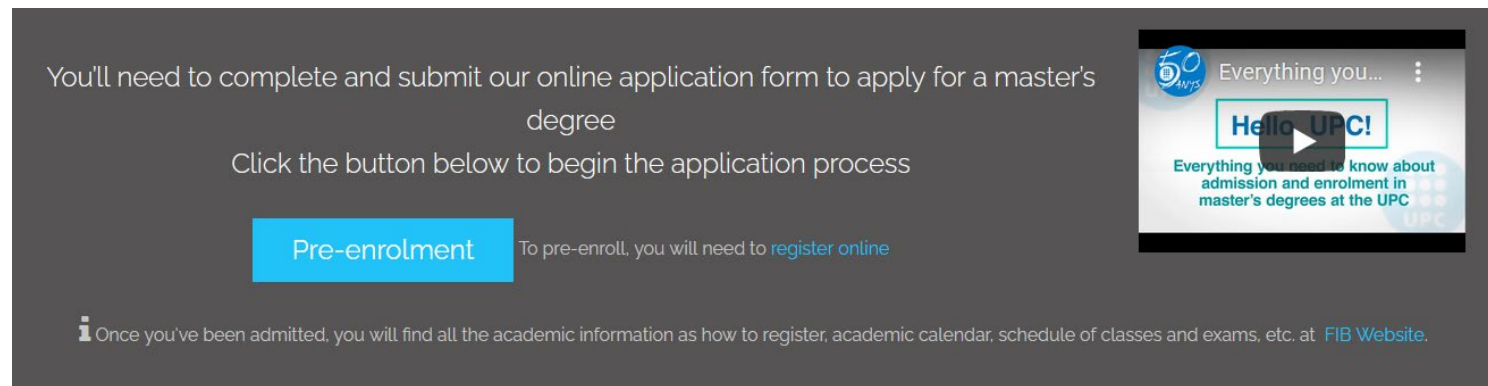
- To pre-enrol follow the instructions
  - Provide the required documentation to evaluate your admission
  - Pay 30,21€ (tax) – **Important**: the button to pay does not appear until you enter all required fields

You can learn more about the pre-enrolment process here:
https://www.upc.edu/en/masters/access-admission-enrolment/pre-enrolment

Prices

Prices 2022/23 for European Union applicants

- MEI: 18,46€ / ECTS

Prices 2022/23 for Non-European Union applicants

- MEI: 102,52€ / ECTS

Note: prices for 2024/2025 will be published in July. Once published, UPC list the prices here: https://www.upc.edu/en/masters/fees-grants

More Information

- General:
  - Information: fib.info.masters@upc.edu
  - Specific academic questions: Òscar Romero (vd.postgrau.fib@upc.edu)

- Websites:
  - Regular modality: https://masters.fib.upc.edu/masters/master-informatics-engineering
  - Industrial modality: https://masters.fib.upc.edu/masters/master-informatics-engineering-industrial-modality
  - Academic calendars: https://www.fib.upc.edu/en/studies/academic-management/academic-calendars
  - Administrative procedures: https://www.fib.upc.edu/en/studies/academic-management/administrative-procedures

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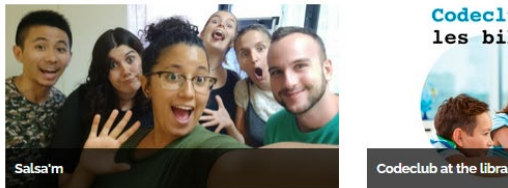- Enrolment Procedure
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Grants and Aids

- Find all details at: https://masters.fib.upc.edu/grants-and-financial-aid

General information

There are multiple ways to fund your studies at the **Universitat Politècnica de Catalunya** - BarcelonaTech (UPC). Grants, scholarships, mobility grants and loans are offered by the University and other bodies.

Complete information about grants and financial aid at the UPC.

Below you will find information on specific scholarships and grants that you can apply for at the FIB. **It is necessary to have applied for admission in the corresponding Master to qualify for any of them**.

Grants

Accenture - Barcelona Digital Talent grants (2021-2022) ⌄

Seidor grants (2021-2022) ⌄

NTT DATA (everis) (2021-2022) ⌄

"Nacho Navarro" grants (2021/2022) ⌄

FIB Visiona - FIB grants (MEI, MIRI and MAI) - 2020-2021 ⌄

Fundació Catalunya-La Pedrera (MAI) ⌄

Fundació Catalunya-La Pedrera (MIRI) ⌄

Scholarships

ARCO Scholarships for MIRI Students ⌄

CBA scholarships in AI for networking for MIRI Students ⌄

inLab FIB ⌄

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Services

- Equal opportunities: https://igualtat.upc.edu/
  - Bullying
  - Gender equality
  - Transgender community
- Inclusion: https://inclusio.upc.edu/
  - Learning needs
  - Teaching support
  - Psychologic orientation
- Solidarity and cooperation: https://ccd.upc.edu/
- Learning languages: https://www.upc.edu/slt/en/reception/languages-upc
- Cultural reception: https://www.upc.edu/slt/en/reception
- Libraries
- Sports Club
- UPCArts

https://www.upc.edu/en/university-life-and-services

Social Life

- FIB promotes social activities: https://www.fib.upc.edu/en/fib/university-life

Events

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FAQs

- If I'm finishing my undergraduate studies this year, can I apply to a master?

Of course! You can be admitted. You only need to finish on time your registration in September. Indeed, if you finalize your bachelor thesis in October you can yet be admitted in our masters. Contact us for more details.

- Can I work and study at the same time?

Of course! there are several opportunities to do extracurricular practices in companies that, in turn, may help you to obtain elective ECTS for some of our masters.

- Can I take a master part-time?

You can do it, but be aware that there are some limitations you need to be aware of. Check the administrative procedures and the master regulations for more details.

- For new incoming students... what about enrolment?

Registration is online. If you require to hand in some documentation you can do it later, before the lectures start in September. Our secretariat will provide more details upon acceptance.

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