















**Master in Informatics Engineering (MEI)** 



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Vice-dean of Postgraduate Studies



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# Welcome to FIB Master's Degree Informative Virtual Session

- Please, mute your micro
- Please, turn off your camera
- Only speaker will share screen to present







 Any question should be via chat but let's do it at the end of the talk



This will open lateral chat

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# FIB:

# Facultat d'Informàtica de Barcelona

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





## **About UPC**

Universitat Politècnica de Catalunya (UPC-Barcelona Tech) 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





## **UPC Main Indicators**

#### **UPC Community**

- → 23,630 bachelor's students
- → 5,039 master's degree students
- → 2,038 doctoral degree students
- → 2,929 lifelong learning students
- → 3,459 teaching and research staff members
- → 2,061 administrative and service staff
- → 69,442 UPC alumni members
- → 351 doctoral theses defended
- → 2,448 graduates of master's degrees
- → 3,476 graduates of bachelor's degrees

#### Knowledge

- → 66 bachelor's degrees 2021-2022
- → 81 master's programmes 2021-2022
- → 45 doctoral programmes 2021-2022
- → 265 continuing education programmes
- → 25 patents
- → 37 technology companies in which the UPC has a shareholding
- → 159 scientific and technical awards received
- → 2,273 articles published in scientific journals
- → **€55,077,585** turnover for R&D projects (2020)

#### UPC in the world

- → 3,823 students participating in educational cooperation agreements with companies
- → 13 company chairs
- → 13 companies set up last year
- → 2,456 companies and other entities that have signed collaboration agreements with the UPC
- → 56 international double-degree agreements with 32 universities
- → 1,430 students in international mobility programmes
- → 787 UPC students (outgoing)
- → 643 mobility students at the UPC (incoming)
- → 45 development cooperation projects
- → 15 international networks with the UPC as a member
- → 4 UNESCO chairs
  - \* 2020-2021 academic year





## **About FIB**

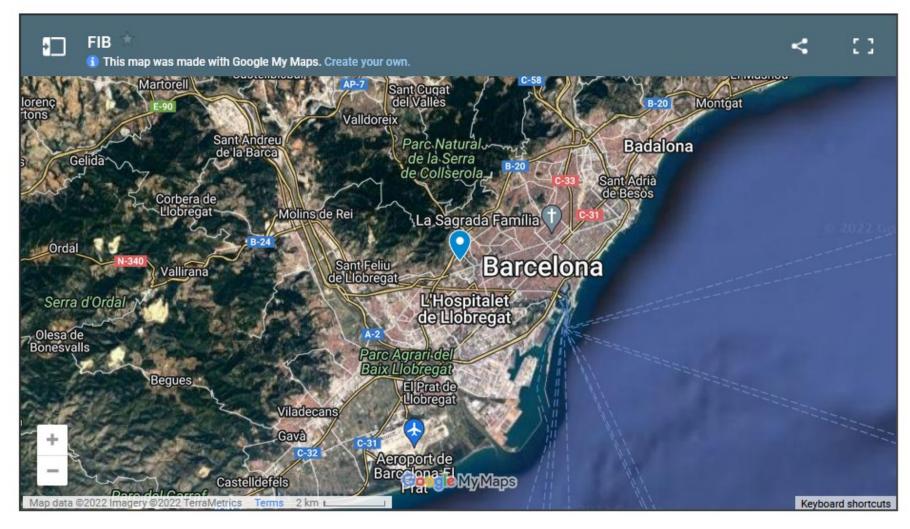
The Facultat d'Informàtica de Barcelona (Barcelona School of Informatics) belongs to UPC and it is the reference centre for Informatics studies since its inception in 1976, and the beginning of the educational activities during 1977-1978.

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

Web: <a href="mailto:linfo.masters@fib.upc.edu">lnfo.masters@fib.upc.edu</a>
Web: <a href="mailto:linfo.masters@fib.upc.edu">http://www.fib.upc.edu</a>

#### **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/





## FIB: Mission

- Provide education on informatics engineering
  - Promote the dissemination of information technologies to contribute to society improvements
  - Provide a strong background to our students that will be used throughout their professional life
- Prioritizing lasting concepts
- Promoting effective working habits and team working
- Stimulating their students' ability of self-sufficiency





# **FIB: Quality Indicators**

# Our masters are externally evaluated and certified with the maximum quality labels by international and national evaluation organisms

- FIB established the processes and mechanisms to implement Internal Quality Assurance System (IAQS). This accreditation process is carried out by quality agencies such as AQU/ENQA and allows supervising the performance of studies and informs the society about its quality.
  - MEI obtained the maximum quality label AQU-Excellence
- What aspects do quality agencies highlight about our masters:
  - Programme learning outcomes
  - Teaching staff
  - Learning support services and resources





EXCELLENT Accreditation

# 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.

#### Opportunities

- Broaden your knowledge on the latest trends and technologies in informatics.
- Complete your education with a stay at a foreign university.
- Carry out your master's thesis or work placement at a company and get paid for it.
- Study in an international environment.
- Take a double master's degree with a foreign university.
- Collaborate with the many research centres and groups linked to FIB.
- Participate in sports, cultural, international cooperation and leisure activities organized by student associations.





# FIB: Why?

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#### **Highly Skilled Professionals**

- Professionals who are equipped to manage ICT projects, installations and organizations that comply with prevailing regulations and meet quality and environmental criteria.
- Entrepreneurs and researchers who are able to carry out projects in an international environment.
- 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.





# FIB in Numbers

2106

Students

3

Bachelor's degrees

7

Master's degrees

443

Graduates 19-20

40

Years in existence

296

Teaching and research staff

14

Student associations

10170

Total graduates







# FIB: Our Reputation

# International Rankings

- Times Higher Education Computer Science: 93
  - 1st in Spain
- QS World University Rankings Computer Science: 51-100
  - 1st in Spain
- US News Best Global Univ. Rankings Computer Science: 37
  - 1st in Spain





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# Master in Informatics Engineering

Summary





# 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.

Get read to become a Chief Information Officer (CIO): fostering entrepreneurship and project management

- Become a Computer Scientist: Technical skills to become a successful professional with strong innovation capabilities

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

- **Equivalent to habilitant masters.** Required to opt in for some public administration (and other entities) positions
- Accreditations: EQUAINE, AQU-Excellence
- Language: Spanish or Catalan (B2)
- 90 ECTS: 1.5 anys Strong professional orientation
  - 45 Compulsory (36 IT, 9 Management)
  - 15 Elective
  - 30 Master thesis

(Management orientation: 9 compulsory and 3 elective ECTS)

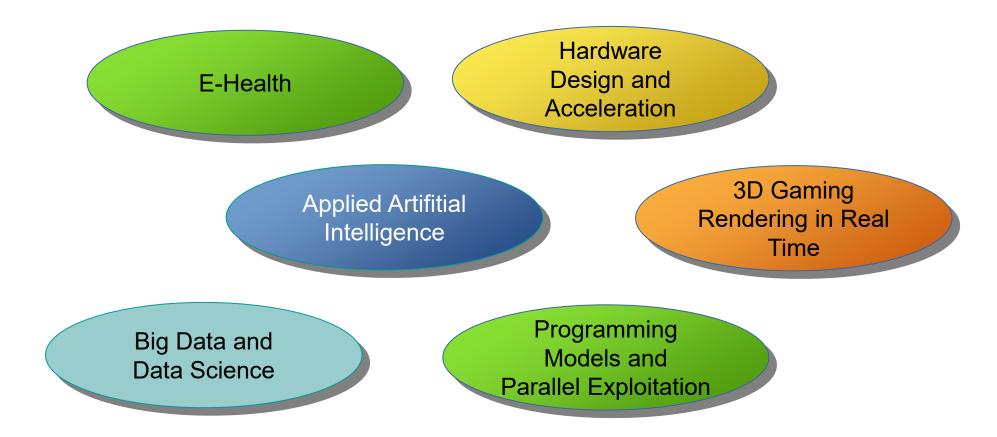
- Lectures in the afternoon (detailed schedule at: https://www.fib.upc.edu/ca/estudis/masters/master-en-enginyeria-informatica/horaris)
- Industrial Agreements Curricular Internships, Professional Experience (elective ECTS)
- Complementary courses might be required

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





# Social and Technological Challenges



TECHNOLOGY TRANSFER
RESEARCH + DEVELOPMENT + INNOVATION





# Master Thesis: HPC for Deep Learning

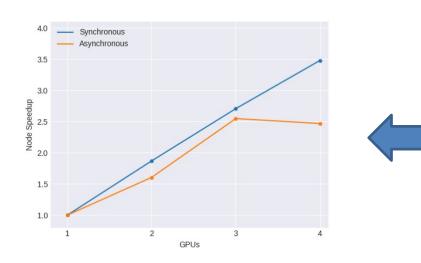
- *Title*: Study of Deep Learning Algorithms Scalability in High Performance Computer Infrastructures.
- Author: Francesc Sastre Cabot. Grade: 10 (MH)

• *Topic*: High Performance Computing and Parallel Techniques to Speed-up Deep

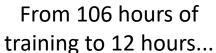
Learning

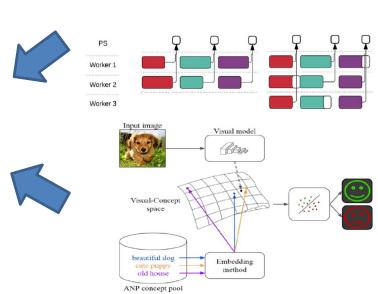
Image classification

• Object Detection, etc.









Worker 3





# **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

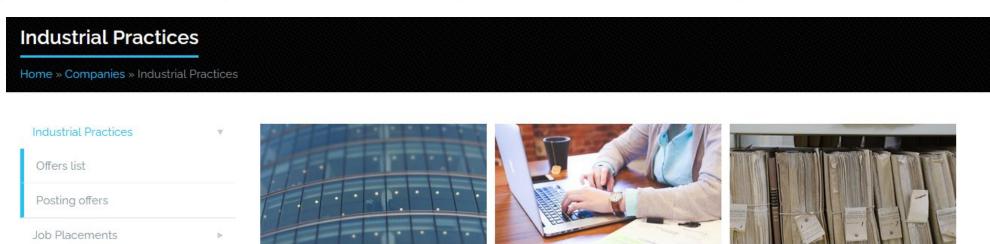




# **Internships**

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

Information for companies



Internships for students become a training activity under the supervision of the Faculty, the goal of which is to apply and complete the academic formation acquired, encouraging the professional skills that prepare for professional activities which facilitate the employment of them.

Regulations

Information for students

The framework of these activities is called educational cooperation agreements, regulated by Royal Decree 592/2014 which regulates the external academic practices of college students.



FIB Visiona

Sponsorship



# 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

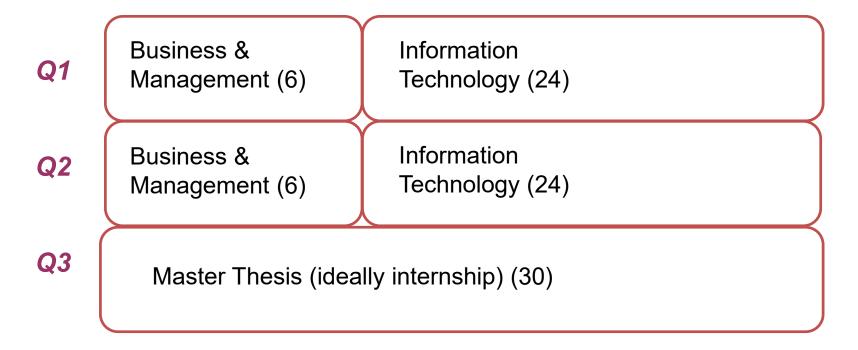




# MEI Vs. MEI Industrial Modality



Recommended MEI path:



Note: Not all courses are offered at every semester. Plan well ahead!





# MEI Vs. MEI Industrial Modality



	Via Ordinària	Modalitat Empresa	
Q1	ACAP, CSI, SEU, SGI,	SGI, CSI, PEGTI+SECS	
	PEGTI +1.5 (1 assignatura Direcció)	18 ECTS	Contracte o buscant CCE
Q2	VPEI+FPEI, DGSI, ISDCM,	VPEI+FPEI, DGSI, ISDCM	CCE o Contracte Laboral
	+ 7.5 (3 assignatures optatives)	18 ECTS	+ Seminaris Formatius
Q3	TFM	SEU, ACAP	CCE o Contracte Laboral
		12 ECTS	+ Seminaris Formatius
Q4	-	TFM (modalitat B/D) 30 ECTS	

+ 6/12 reconeixement de crèdits

#### **ECTS (industrial modality)**

• 48 ECTS FIB

• 42 ECTS Industry (25/30h = 1 ECTS)

Total: 90 ECTS





Plenty of options! 189 agreements with 181 universities in 41 countries

- Study abroad (one or two semesters)
  - Conditions (max ECTS): 30
  - You can request it once you have passed 30 ECTS
  - Mobility programs (many with scholarships)
    - CERN
    - Erasmus+
    - Latin America, USA and Canada
    - National Institute of Informatics (NII) Tokyo
    - China
- Double degrees
  - Escuela de posgrado de la Pontificia Universidad Católica de Perú (PUCP)
  - Institut Supérieur d'Informatique, de Modélisation et de leurs Applications (ISIMA)
- Internship abroad
  - Ever-open calls: Erasmus+, IAESTE, AIESEC, Entrypark
  - Academic institutions
  - Industry
- Other activities (summer schools, short stays...)





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





**Studies** 

Mobility

Research

Companies

The FIE

Q



Home » Mobility



Knowing a new university, discovering a new country or improving your language skills are some of the advantages of the mobility programs offered by FIB.

Personal experiences that will allow you to stay in foreign universities and intern at businesses worldwide.



Incoming



Outgoing



Double degrees

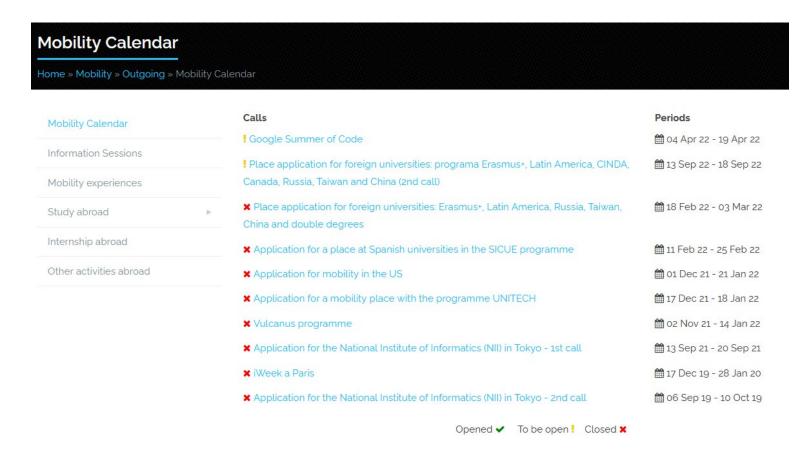


International Partnerships





• Mobility calendar: <a href="https://www.fib.upc.edu/en/mobility/outgoing/mobility-calendar">https://www.fib.upc.edu/en/mobility/outgoing/mobility-calendar</a>







• Information Sessions: <a href="https://www.fib.upc.edu/en/mobility/outgoing/information-sessions">https://www.fib.upc.edu/en/mobility/outgoing/information-sessions</a>

# Mobility information session 2021-2022

For mobility stays during the academic year 2022-2023

#### 1st semester

#### Wednesday, 17 November 2021

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: https://meet.google.com/dwj-zygt-wkp@

• Morning session: 12:00 pm



#### 2nd semester

#### Wednesday, 16 February 2022

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: https://meet.google.com/mip-zfid-fte

• Morning session: 12:00 pm

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







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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













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





# **Important Dates**

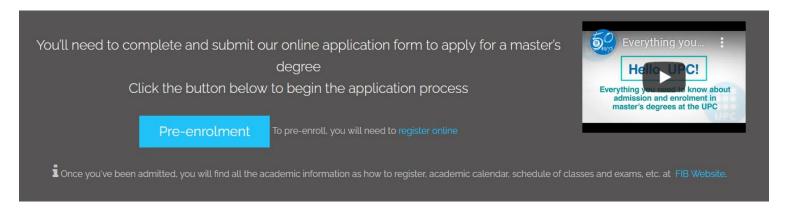
- Pre-enrolment: From 1<sup>st</sup> March to 27<sup>th</sup> May 2022
- Two (three) admission periods:
  - First period:
    - Deadline to apply: 22<sup>nd</sup> April 2022
    - Tentative admission notification: 29<sup>th</sup> April 2022
  - Second period:
    - Deadline to apply: 27<sup>th</sup> May 2022
    - Tentative admission notification: 3<sup>rd</sup> June 2022
  - Third period:
    - Not guaranteed, only if seats available
    - Tentative deadline: 30<sup>th</sup> June
    - Tentative admission notification: 7<sup>th</sup> July
- Check the admission criteria at: <a href="https://masters.fib.upc.edu/masters/master-informatics-engineering">https://masters.fib.upc.edu/masters/master-informatics-engineering</a>





## **Pre-enrolment**

 Start the procedure from the <u>masters.fib.upc.edu</u> website. Look for your favourite master, scroll down and look for the <u>pre-enrolment</u> 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: <a href="https://www.upc.edu/en/masters/access-admission-enrolment/pre-enrolment">https://www.upc.edu/en/masters/access-admission-enrolment/pre-enrolment</a>





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## Admission

- Depending on your pre-enrolment data your application will be evaluated within the first or second period
- Evaluation outcome: accept, reject, postpone (1st round) or waiting list (2nd round)
  - First period:
    - Deadline to apply: 22<sup>nd</sup> April 2022
    - Tentative admission notification: 29<sup>th</sup> April 2022 (accept, postpone, reject)
  - Second period:
    - Deadline to apply: 27<sup>th</sup> May 2022
    - Tentative admission notification: 3<sup>rd</sup> June 2022 (accept, waiting list, reject)
- Accepted applications are contacted and informed about all relevant academic information as how to register, academic calendar, schedule of classes and exams, etc.
  - All this information is already available at FIB Website
  - Before registration, you must pay 300€ (tax) to guarantee your place (this money is later deduced from the registration cost)
- Postponed applications get their final decision during the second period
- Waiting list applications are contacted in order if drop outs happen
- Rejected applications are not accepted to follow that program





## **Prices**

# Prices 2021/22 for European Union applicants

• MEI: 27,67€ / ECTS

# Prices 2021/22 for Non-European Union applicants

• MEI: 41,05€ / ECTS

**Note**: prices for 2022/2023 will be published in July. Once published, UPC list the prices here: <a href="https://www.upc.edu/sga/ca/matricula/preus/PreusMaster">https://www.upc.edu/sga/ca/matricula/preus/PreusMaster</a>

## **More Information**

- General:
  - Information: info.masters@fib.upc.edu
  - Specific academic questions: Òscar Romero (vd.postgrau@fib.upc.edu)
- Websites:
  - Regular modality: <a href="https://masters.fib.upc.edu/masters/master-informatics-engineering">https://masters.fib.upc.edu/masters/master-informatics-engineering</a>
  - Industrial modality: <a href="https://masters.fib.upc.edu/masters/master-informatics-engineering-industrial-modality">https://masters.fib.upc.edu/masters/master-informatics-engineering-industrial-modality</a>
  - Academic calendars: <a href="https://www.fib.upc.edu/en/studies/academic-management/academic-calendars">https://www.fib.upc.edu/en/studies/academic-management/academic-calendars</a>





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#### **Grants and Aids**

Find all details at: <a href="https://masters.fib.upc.edu/grants-and-financial-aid">https://masters.fib.upc.edu/grants-and-financial-aid</a>

#### **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



## **Grants and Aids**

- Becas del Ministerio de Educación 2022/23
  - If you plan to study a master, apply! (even if you are not sure what and where)
    - In September you will be asked to provide information of the master chosen
  - Period to apply: from 30<sup>th</sup> March to 12<sup>th</sup> May (way earlier than in previous years)
- Further details: <a href="https://www.upc.edu/sga/es/Becas/BecasEstudio/BecaMEyFP22">https://www.upc.edu/sga/es/Becas/Becas/BecasEstudio/BecaMEyFP22</a>
- Support to the process (UPC video): <a href="https://www.youtube.com/watch?v=BsQoHywfrl4">https://www.youtube.com/watch?v=BsQoHywfrl4</a>

**Important note**: since this master is equivalent to an habilitant master, but not define as an habilitant one (in Computer Science this concept is not regulated) when opting to the "beca del ministerio" you must choose "no" to the option "master habilitante"





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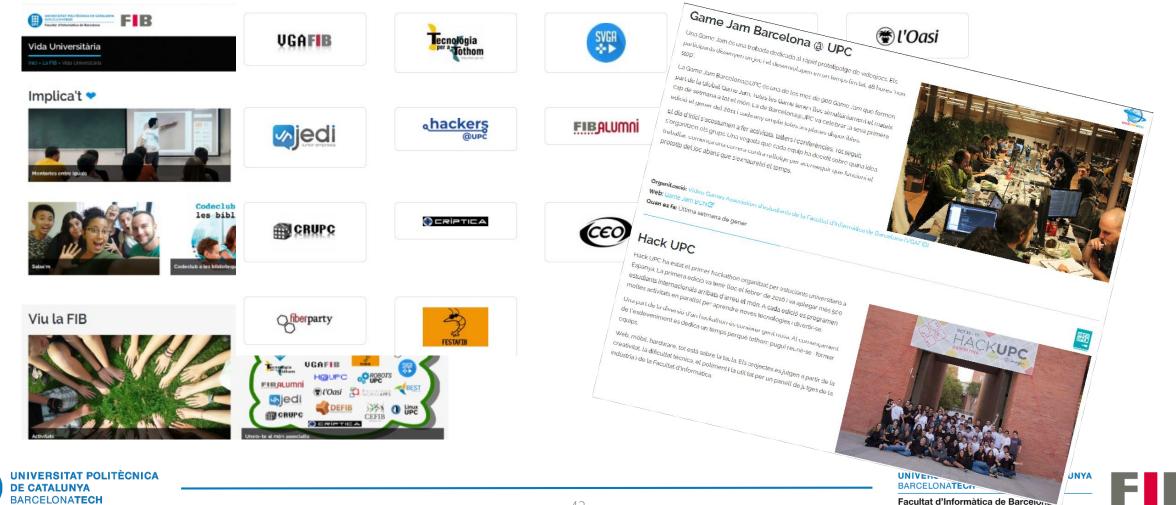
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## Social Life

• FIB promotes social activities: <a href="https://www.fib.upc.edu/en/fib/university-life">https://www.fib.upc.edu/en/fib/university-life</a>





# **Social Life**

#### WiDS: Women in Data Science Barcelona 2021









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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 change to MEI industrial modality if I started the regular one?
- Yes. Indeed, the industrial modality is thought to help students accommodate their studies with their jobs / internships
- What about next academic course and covid-19?
- Our objective are 100% face-to-face lectures. If not possible due to public health recommendations, we will maximise face-to-face / hybrid lectures.
- For new incoming students... what about enrolment?
- Registration has been online in the last courses. If you require to hand in some documentation you can do later before the lectures start





