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# Master in Digital Solutions Development

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[www.barcelonatechnologyschool.com](http://www.barcelonatechnologyschool.com)



# Welcome

If you're passionate for technology and want to contribute to drive the digital transformation, Barcelona Technology School is your place.

The digital ecosystem in Barcelona is now warmer than ever. The strategic alignment of the government, the industry and educational institutions like BTS, are mixing the best ingredients to boost the European capital of innovation.

The results of the Barcelona's digital strategy are excellent, international companies are landing in Barcelona to relocate their digital and tech headquarters. To mention a couple of examples: Zurich Insurance Group has opened its International Big Data Centre in the city; Nestlé has launched its Global Digital Hub in order to lead digital services from Barcelona, the European Capital of Innovation.

A healthy startup environment also feeds this innovative ecosystem; the city concentrates 60% of the total investment on startups in Spain. This, supported by initiatives like the Mobile World Congress, makes the city an ideal

place for international entrepreneurs. More and more startups, accelerator programs, venture capital players and tech educational projects choose the city to develop its activity.

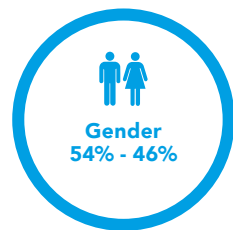
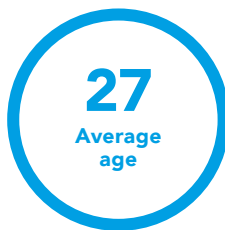
Thanks to this healthy tech ecosystem, there has been a high demand of digital talent which permits Barcelona Technology School to ensure you professional experience through paid internships and job opportunities during master programs that will help you to develop the most demanded digital skills.

Now, you have the opportunity to join the digital transformation from one of the hottest international tech spots.

**Josep Clotet**  
General Manager



# BTS Student Profile



**55%**  
Engineering & Computing



**27%**  
Economics & Management



**9%**  
Sciences



**9%**  
Others

Academic Board (cv-professional experience)

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# Strategic Advisory Board



**Ricardo Baeza**  
Yahoo!  
VP of Research



**Aleix Valls**  
Mobile World Capital  
CEO



**Marko Gargenta**  
Twitter  
Director of Twitter  
University



**Sudha Jamthe**  
Ebay  
Mobile Business Leader



**Andy Feierfeil**  
Target  
Senior Mobile Manager

The members of the BTS Strategic Advisory Board are well known industry leaders who take care of the quality and contents of the programs.

Academic Board (cv-professional experience)

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# Academic Directors



**Sandro Mancuso**  
London Software  
Craftsmanship Founder



**Carlos Castillo**  
Director of Research for  
Data Science at Eurecat



**Marc Torrens**  
CIO at Strands

# Professors



**Marc Planagumà**  
Big Data



**Miquel Rodríguez**  
Agile



**Saul Tessler**  
Entrepreneurship



**Jorge Blasco**  
Digital Business



**Javier Domingo**  
Cloud Computing



**Pablo Sordo**  
Android Development



**Gaby Prado**  
User Experience



**Michele Trevisiol**  
Big Data



**Sonia García**  
Web Development



**José Carlos Gil**  
Software Craftsmanship



**José E. Rodríguez**  
Web Development



**Pedro Fernandes**  
Creative Technology



**Martí Escursell**  
Venture Capital



**Marc Boquet**  
iOS Development



**Alfred Maeso**  
Project Management

# 3D Learning

Barcelona Technology School has developed its own practical, active and participatory methodology with emphasis on “learning by project” where participants generate their own digital solutions. This methodology reflects digital industry demand for new professionals with skills such as:



## **Business and Innovation Skills**

- > DIGITAL TRANSFORMATION
- > DIGITAL & MOBILE BUSINESS
- > CREATIVE TECHNOLOGY
- > INNOVATION
- > ENTREPRENEURSHIP
- > FINTECH
- > LEGAL TECH
- > CHANGE MANAGEMENT
- > DIGITAL TALENT&CULTURE







## Core Skills

- > EMPATHY AND COMMUNICATION
- > INTERNATIONAL SCOPE
- > FLEXIBILITY
- > COLLABORATION & NETWORK
- > TRANSVERSAL VISION
- > CURIOSITY
- > COMPROMISE & RESPONSIBILITY



## Technical Skills

- > WEB DEVELOPMENT
- > MOBILE DEVELOPMENT
- > USER EXPERIENCE
- > BIG DATA
- > MACHINE LEARNING
- > CLOUD COMPUTING
- > INTERNET OF THINGS
- > CYBER SECURITY
- > SOFTWARE CRAFTSMANSHIP
- > BLOCKCHAIN

# BTS

# TECH INDUSTRY

# ECOSYSTEM

Barcelona Technology School has assembled an ecosystem of companies that supports BTS programs, providing industry exposure and bring professional experience to students through internships and job opportunities.

With the support of

**Academic Partners / Industry Partners / Spanish and Catalan Government**



Technology Research  
Centre of Catalonia



Innovation and  
High-tech Consulting



Mobile Transformation  
for Society



Digital Transformation  
Services



Spanish Government  
for Internationalization



Government  
of Catalonia



Powering Content,  
Search & Data



Best Luxury Hotels  
around the world

# BTS



## Academic Board

High qualified instructors and well known professionals



## IT Labs & I+D+i

IT Labs & innovation projects exposure



## Career Mentors

Get professional orientation for your digital career



## Project Mentors

Real & experienced Professionals will mentor your digital projects



## Entrepreneurs & Incubators

Inspire your own projects and new disruptive digital business



## University

Ensures academic accreditation, quality and certification



## Digital Companies

Visit and learn from the tech leaders.



The Mobile World Congress Startup Platform



Global Network of Startup Accelerators



Leading Company in Humanoid Robots



Empowering IT Teams



Barcelona Big Data Centre of Excellence



Fintech Leader Monetizing Data

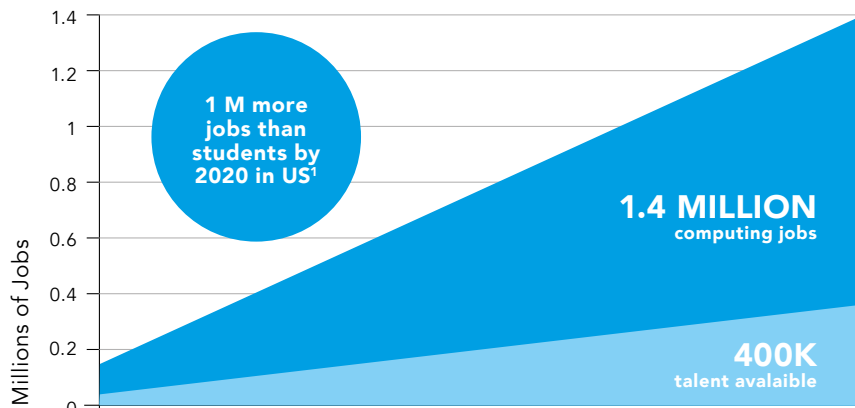


EdTech Company for Learning Experience



Cloud Computing for Digital Society

# Digital companies need your talent



<sup>1</sup>Source: BLS, NSF, Bay Area Council Economic Institute; <sup>2</sup>Source: Bureau of Labor Statistics' Occupational Outlook, Handbook and Career Guide to Industries.

By **2024** there will be **4.500.000** unfilled computer science jobs worldwide<sup>2</sup>

Tech industry is exploding and the key digital companies need your talent. Barcelona Technology School connects your career with the digital sector while offers you the most demanded digital knowledge & skills.

Thanks to the agreements Barcelona Technology School has with the digital industry, you will have the chance to live a professional experience trough paid internships in some of the top digital companies that are part of the BTS Ecosystem.



Your  
Talent

**BTS**

Digital  
Industry

Paid Internships & Jobs Opportunities

# Sports

All the BTS students enrolled into a Master program have free access to one of the best sport clubs in the city which is located in front of the beach. Enjoy swimming pools, gym and lead classes, spa, paddle courts and much more.

Play sports, make friends or simply take a relaxed bath on the sea.



# Global Chapters

The Global Chapters programs are an international experience for students & entrepreneurs that want to discover the epicenters of the world's digital ecosystems:



## CHAPTER 1

New York

1 Week

English

December 2017

3.000 €



## CHAPTER 2

Shanghai

1 Week

English

April 2018

3.000 €



## CHAPTER 3

San Francisco & Silicon Valley

2 Week

English

July 2018

5.000 €

This experience exposes students to how business is done in those ecosystems and creates long lasting relationships between students, companies, and business leaders.

## Sample Week Itinerary

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Visit large digital corporations	Tour in Silicon Valley	Entrepreneurship culture immersion	Visit the Palo Alto Research Center	Network building	Private VC and Startup parties	Free
Meals with digital leaders						

## Students visit companies like

Google

LinkedIn

TESLA

twitter



YouTube



ORACLE

YAHOO!

facebook

UBER

ebay

Microsoft

amazon







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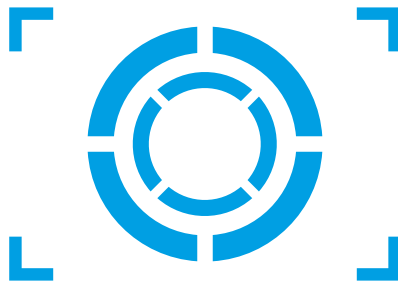
# Master in Digital Solutions Development. MDSD

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The most advanced Master for the next  
generation of developers.

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# Master in Digital Solutions Development. MDSD



## Goals

The main goal of MDSD is to help you develop the skills that will permit you to participate in the digital transformation.

This program is focused on the development of digital solutions, providing you a wide vision and understanding of the most influential knowledge and technologies.

# Contents Master in Digital Solutions Development

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## Web Development

1. Fundamentals of HTML5, CSS3 and Javascript
2. JQuery, Angular JS
3. Java backend, Spark Java, DropWizard, Deployment
4. Database, MySQL, Postgres



## Software Craftsmanship

1. Introduction to Software Craftsmanship
2. TDD
3. Software design
4. Dealing with legacy code



## Mobile Development

1. Mobile development
2. TDD
3. Mobile app security
4. Publishing apps



## User Experience

1. UX Strategy
2. UX Process & Research
3. Conceptual & Visual design
4. Prototyping



## Agile

1. Agile Management VS Traditional Management
2. Scrum
3. Kanban
4. Visibility and transparence



## Big Data

1. The Data-driven business
2. Data engineering
3. Data science
4. Visualization & Exploitation

# Contents Master in Digital Solutions Development

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## Digital Business

1. The digital transformation
2. Digital products
3. Online marketing
4. Creative strategy on the internet



## Mobile Business

1. Business Case for Mobile
2. The mobile landscape
3. Setting mobile marketing KPI's
4. Mobile's Role In The Purchase Cycle



## Entrepreneurship

Basics associated with innovation and building a new venture or initiative from scratch either inside an existing organization or as a new startup



## Creative Technology

Ability to think creatively with a business frame of mind, focusing on bringing new innovations to market. It will instill an appreciation of the characteristics and motivations of creative people.



## Cloud Computing

1. Business Value in Cloud Computing
2. Steps to Successful Cloud Services
3. Managing Cloud Computing Risks
4. DevOps: Continuous Integration & Deployment



## Project

Hands-on training. Thanks to a digital product transversal challenge, students combine business and innovation skills with tech development skills to build a "ready to market" project.

# Details Master in Digital Solutions Development

TYPE	LOCATION	DURATION	LANGUAGE
Full Time Master degree	Barcelona, Spain	9 months (1 academic year)	English
ACCREDITATION	CREDITS	INTAKE	FEES
by University of Barcelona*	60 ECTs	October	17.000€

## PAID INTERNSHIPS & DIGITAL JOBS

BTS offers paid internships in leading digital companies to their students. Take advantage of the BTS ecosystem and get a professional experience during & after the program.

\*University of Barcelona ranked best university in Spain by:



Academic Ranking of World Universities (August 2016)



QS World University Rankings, WUR (September 2016)



Center for World University Rankings (July 2016)



Best Global Universities (October 2016)

Ask for information:



[info@barcelonaitschool.com](mailto:info@barcelonaitschool.com)



+34 933 041 721

**73%** of all jobs in the next **5 years** will require technology skills

# Introduction to Software Development. Pre-Course

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For entry students without technical background that want to enroll the Master in Digital Solutions Development.

TYPE	STARTS	DURATION	FEES
Full time	September	4 weeks	2.200€

Technology background is not mandatory

## Contents Introduction to Software Development

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### Introduction to relational Database & SQL

1. Introduction to relational database
2. Data management language
3. SQL (Structured Query Language)
4. Data definition language



### Introduction to Java

1. Java basics
2. Flow of control
3. Composition and inheritance
4. Interfaces



### Introduction to Object-oriented programming

1. Introduction to software development lifecycle
2. Fundamentals of programming
3. Object-oriented programming



### My first development project

1. Hands on work

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The aim of this course is to provide the base knowledge that any student needs to enroll the Master in Digital Solutions Development.

# How to apply

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If you are passionate about software development and you would like to access to job opportunities, develop the best digital talent and have a master experience in Barcelona...we just ask you for 4 requirements:

## 1 Application Form

[barcelonatechnologyschool.com](http://barcelonatechnologyschool.com)

## 2 Motivation Letter & CV

Send the admissions office your CV as well as a motivation letter explaining how you think the digital industry will be in the next five years and how you could contribute to the digital transformation.

You can submit this documentation directly to [info@barcelonaitschool.com](mailto:info@barcelonaitschool.com)

## 3 Interview

Our admission board, as well as the director of the program, will analyze your candidature and if you meet the profile of Barcelona Technology School, we will call you to have a chat.

## 4 Payment

To ensure your place on the Master, you must secure it by making the reservation payment.

## MDSB

Web and Mobile Development, Cloud Computing, Big Data, User Experience, Agile, Software Craftsmanship, Digital Innovation, Entrepreneurship and Digital Business.

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Full-Time Program

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Barcelona

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9 Months

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English

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Intake: October

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60 ECTS

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17,000€

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Awarded by University of Barcelona.  
Ranked best university of Spain.

## Admissions Office

+34 933 041 721

[info@barcelonatechnologyschool.com](mailto:info@barcelonatechnologyschool.com)

[www.barcelonatechnologyschool.com](http://www.barcelonatechnologyschool.com)



# Testimonials



"Cloud computing was my favourite class. Fantastic teacher, very committed to help us. It was a great course! Lot of professional applicability and very valuable skills!"

**Damien Dupont – France**  
**BTS student**



"Great Android Development teacher! Emphatetic to the learner and very clear explanations"

**Hugo Davis – UK**  
**BTS student**



"Web Development teacher is one of the best teachers I had. Smart, calm, professional, always helps us and makes everything possible to improve our classes"

**Nastassia Sherenkova – Belarus**  
**BTS student**



"Best teacher of the MDSD, more like a mentor or someone that wants the best of ourselves than a regular teacher. Digital Business is going to be pretty neat, I'm sure of it!"

**Juan Orero – Spain**  
**BTS student**



"The UX course has been the one that shaped this Master programme the most. It has a good relation between practice and theory and is most applicable to our professional life. Gaby takes a lot of attention to prepare the course and teach us detailed and complex examples of UX that currently shape the technology world. She is a very passionate teacher and has turned us into critical thinkers."

**Susanna Maier – Austria**  
**BTS student**



why **BTS**

- 1 Certification awarded by the University of Barcelona. Ranked best university of Spain.
- 2 Professional experience during the Masters through paid Internships & Job Opportunities.
- 3 Ecosystem of top digital companies and tech labs.

An aerial photograph of Barcelona, Spain, showing a dense urban landscape with numerous buildings, streets, and green spaces. The sky is clear and blue. The text is overlaid on the top half of the image.

# GREAT CAREERS ARE WAITING FOR BARCELONA TECHNOLOGY SCHOOL GRADUATES

- 4 International environment of tech people from all over the world.
- 5 Development of the most demanded digital skills.
- 6 Beach & sports club, social and sports installation located on the beachfront of Barcelona.

## Information and admissions

info@barcelonatechnologyschool.com  
(+34) 93 304 17 21

## Location

Barcelona. Almogàvers 123  
Barcelona's Technological  
district (22@)

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# BTS

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