

International Bachelor
Data Science
by Design

data for
a better
life

Enhancing our digital life

Our digital lives produce data, our digital lives depend on data.

Data is the digital gold of the 21st century.

Their collection, storage, sharing, structuring, analysis, exploitation and representation are the conditions for a better life, a better society and a better planet.

The task is a difficult one because it is necessary to master both highly specialized mathematical and computer skills, while at the same time invoking the knowledge, methods and tools of design, to put them at the service of each and every one of us.

It is the ambition of the International Bachelor's degree "Data Science by Design" to give you this double mastery.

From Data to Meaning

Data is everywhere!

Data Science applies to many fields such as social networks, health, education, mobility, smart cities, urban planning, manufacturing, food & agriculture, finance or physics.

Problems and opportunities are everywhere, and they need to be both identified and resolved.

Data is complex!

To become a Data Scientist and to be able to unleash the power of data implies to deeply invest important fields such as Artificial Intelligence, Machine Learning, Deep Learning, Statistics, and Programming. But it also need to project oneself on more prospective topics such as Quantum computing.

From Meaning to Experience

But Data is nothing if they are not used for the benefit of our lives, in either nice or difficult situations, in an hospital or at school, in a concert or at work, in our intelligent cars or in public spaces.

This is where we need to apply the Design methodology to identify problems, observe the situations, imagine all the potential solutions, shape and deliver them.

This is what makes our bachelor very unique: the mix between Sciences and Design.

Design applies to strategies, organizations, systems, services, interfaces)and objects. Human centered, the design thinking contributes to create successful life experiences.

A Project Driven Pedagogy

In our Bachelor, students are always learning by doing, where Projects play a central role. They motivate and give meaning to fundamental scientific learning and create the condition for strong and creative engagements. The connection between concepts and life is the condition for growing as a professional and a human being.

This is even strengthened by aFirst of all, students learn fundamental concepts, then they apply those concepts in projects and internships. Thanks to this they understand that you have to learn more.

This is a kind of monitoring loop.

An international experience

The world is the playground of datascientist, because data know no frontiers.

To prepare you to his international reality, you will have the possibility to start your program in France for 2 years, and continue it in Singapore, the iconic smart cities.

Sociology	x							
Ethnology		x						
Anthropology			x					
Semiology				x				
Digital sociology					x			
Ecology						x		
Data Science								
Machine Learning/Deep Learning					x			
Fundamentals of Data Mining					x			
Text Mining					x			
Social Network Analysis					x			
Data and Critical Thinking						x		
Data Mining						x		
Artificial Intelligence						x		
Data Integration							x	
Business Intelligence							x	
Web semantic							x	
Spatio temporal data							x	
Data Governance								x
Data Integration								x
Big Data								x
Projects	x	x	x	x	x	x	x	x
French as a foreign language	x	x	x	x	x	x	x	x
Representation and Vizualisation								
2D- Adobe	x							
UX/UI			x					
3D-Unity			x					
Graphic facilitation					x			
4D- Adobe Premiere					x			
Internship		4 weeks		8 weeks		16 weeks		16 weeks

Starts in September **Type:** full time **Duration:** 4 years **ECTS:** 240 **Language:** English

Admission Criteria

- Strong academic skills in high school, especially in Mathematics and Science.
SAT 550-600, A-level ABB with A in mathematics
French baccalauréat; mention TB/B, Specialization in Mathematics, Physics, Digital and Computer Science, science of Engineering
- High school leaving certificate enabling access to a university.
- Swiss high-school maturité certificate, European high-school certificate, or equivalent.
- English proficiency level CEFR (Common European Framework of Reference for languages) B2 or with a copy of either one of the tests scores TOEIC 800, IELTS 6.0, TOEFL 80.

How to apply:

Applicants must send all the required documents to admission_bachelor@cyu.fr

Selected candidates will be notify to join the motivation interview (face-to-face, telephone, Skype)

After 4 years of study, students obtain the Bachelor Data Science by design from CY Cergy Paris University and a Design thinking Certification from CY School of Design.

With one more year of studies, obtain the engineer diploma of Grande Ecole CY Tech or a Master in Data Science

Testimonial

“My name is Anh Thu, and I am coming from Vietnam. Since my High school year, I always had great interest in Mathematics. The idea of being an entrepreneur in the future and the desire of taking some mathematics applied courses drive me to look for the suitable bachelor program for my study as well as for my future career development. By doing some research, Data science appears the most suitable choice for me. The program design offered by CY Tech attracts my attention as what I was looking for : the business knowledge, the applied mathematics and some computer relevant courses, design, are all incorporated in this program. I enrolled in the Bachelor Program later on in September 2019, and I must say I am very satisfied with programme contents delivered by the qualitative faculty and the learning infrastructure equipped on campus”.

Example of project

When someone writes a sentence, NLP algorithms decompose it and highlight grammatical points, like if there is a Pronoun in the sentence. The target language is French or English. Students created an app that automatically creates exercises where the learners must identify some parts of the sentence and know their nature (pronouns, verbs, etc).

Contact:

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Lien page web: à déterminer

CY Tech

Born in 1985, delivering the official engineering Degree since 1992, and member of the prestigious “Conférence des Grandes Ecoles” since 2002, EIST has joined CY Cergy Paris Université to become CY Tech on January 1st 2020.

Whether in the fields of finance or the vast and varied fields of new technologies and civil engineering, CY Tech leads to numerous functions in the most diverse sectors of activity.

In a constantly changing world where technologies are being renewed at high speed, CY Tech has chosen to stay as close as possible to the needs of companies and technological developments and is developing its teaching to lead its students towards ever more promising and innovative jobs. In addition to its Mathematics and Computer Sciences degrees, CY Tech is opening new training in Civil Engineering, Biotechnology and Chemistry as well as in Economics and Management.

CY Tech training offer is organised in:

- Engineering
- Masters, DU
- Continuous training with specialised masters
- International masters with abroad campus and new training
- PHDs

CY Tech is located in France both in Cergy (95 - Val-d'Oise) and Pau (64 - Pyrénées-Atlantiques).

CY School of Design

Created in September 2020 within CY Tech, CY school of design is training designers of the 21st century, ready to position themselves on the continuum from matter to decision.

It combines a very intense project driven pedagogy with a very demanding program in Human sciences and management. The connection with the industry is a strong backbone which conditions the professionalization of our students.

It delivers a 5 year integrated Master in Design.

CY Cergy Paris University

From the 1st of January 2020, Cergy-Pontoise Université and EISTI become CY Cergy Paris Université. It represents 24,000 students. ESSEC is associated to the university and takes part in its governance.

The academic offer is simply structured as an undergraduate university (CY SUP) and 5 undergraduate schools : 4 within the university, the 5th being ESSEC.

CY SUP coordinates between high schools while giving to students fulfilling studies and a great life experience.

With ESSEC, the others graduate schools led by the university are:

- **CY Tech**, school in Sciences, Engineering, Economics, and Management with the EISTI input in Engineering
- **CY Arts and Humanities**, in association with National Higher School of Arts Paris-Cergy (ENSAPC), National Higher School of Architecture of Versailles (ENSAV), National Higher School of Landscape Design (ENSP) and National Heritage Institute (INP)
- **CY Education**, with INSPE, EPSS and ILEPS
- **CY Law and Political Sciences**, with SciencesPo St-Germain en Laye

