



# **MASTER** Collective Intelligence

Africa Business School Cluster

## ABOUT MOHAMMED VI POLYTECHNIC UNIVERSITY

Mohammed VI Polytechnic University is an institution oriented towards applied research and innovation, which aims to be among the world-renowned universities in these fields.

The University is committed to an education system based on the highest international standards in crucial fields such as science and technology, humanities, economics and social sciences for the sustainable economic development of Morocco and the African continent.

This allows Mohammed VI Polytechnic University to consolidate Morocco's avant-garde position in these fields through the implementation of a unique partnership approach and the strengthening of its academic and executive education programs in relevant skills, for the future of Africa.

Located in the town of Benguerir, near Marrakech, and situated in the heart of Mohammed VI Green City, Mohammed VI Polytechnic University intends to combine local roots and a national, continental and international influence.



*You are most  
welcome to join us*



## AFRICA BUSINESS SCHOOL CLUSTER

### SCHOOL OF COLLECTIVE INTELLIGENCE

Begun in June 2019, we are developing the world's first comprehensive programs in collective intelligence at the masters and PhD level.

At our campus in Benguéir, Morocco, we offer research, teaching and training programs that will help advance the emerging field of collective intelligence. To achieve our ambitions, we are partnering with scholars from leading institutions such as MIT, Yale, and NYU.

#### OUR MISSION

1. Produce new scientific knowledge and technologies for a more sustainable society
2. Teach to break down barriers-geographic, intellectual, and cultural
3. Create new spaces for dialogue and collaboration

### WHAT IS COLLECTIVE INTELLIGENCE?

Collective Intelligence is the ability to **effectively share information and solve complex problems as a group**; a natural phenomenon in which collective performance can surpass that of any individual.

Collective intelligence is the scientific field studying the conditions of this phenomenon within teams, organizations, and societies.

#### Why does the world need collective intelligence?

1. To adapt governments, civil society and business to increasing complexity
2. To sustain relationships of trust and common purpose
3. To create systems that bring many forms of intelligence together to solve the challenges of a increasingly connected world



## MASTER COLLECTIVE INTELLIGENCE

### OBJECTIVES

The Masters in Collective Intelligence will train students in the basic pillars of collective intelligence, including cognitive and data sciences as well as participatory methods and organizational design. Particular emphasis will be placed on mastering experimental and statistical techniques for testing the effectiveness of different methods for maximizing collective intelligence. Students will gather experience applying these methods in research and/or real-world settings.

### CORE COMPETENCIES

- Masters students in Collective Intelligence will learn to think critically and scientifically about data, human behavior, and practical problems such as leading positive behavior change within teams, organizations and communities.
- They will learn how to carefully design behavioral experiments and randomized controlled studies, in which experimenters manipulate variables between experimental conditions in order to infer causal information about how the mind works and/or

### CAREER OUTLOOK

Interest in collective intelligence is on the rise in corporations, universities, and societies at large. This program will prepare our students for a range of careers in data science, information systems and technology management, human resources and organizational transformation.

the effectiveness of certain interventions within organizations.

- In addition, students will develop technical skills in the areas of data science, statistics and computer science (e.g., designing computer systems to augment and complement collective reasoning and problem-solving). Finally, they will gain experience designing and applying technologies that reinforce collective intelligence in real-world settings.

### ELIGIBILITY



Candidates must hold a Bachelors degree (BA) or equivalent. Given the highly interdisciplinary nature of our Master's program, we are open to students with a wide range of academic backgrounds. Candidates will be evaluated on the basis of their skills and motivation. Knowledge of applied statistics, and management are considered positive traits but not necessary for admission. Basic coding skills are highly recommended.

## Pedagogical Committee

**Dr. Cathal O'MADAGAIN**

(UM6P)

Scientific Director  
Cognitive science,  
philosophy



**Prof. O'Madagain's** work explores the social foundations of human thinking. He studied at the University of Toronto and previously worked as a research scientist at the Max Planck Institute for Evolutionary Anthropology.

At SCI he leads research on collaborative learning and on cross-cultural differences in the ways we share information and solve problems in groups.

**Dr. Lex PAULSON**

(UM6P)

Executive Director  
Philosophy,  
political science



**Dr. PAULSON** is Co-founder of the School of Collective Intelligence, Dr. Paulson has trained leaders in government and business in over 20 countries.

A mobilization strategist for the campaigns of Barack Obama and Emmanuel Macron, he studied political theory at Yale and Cambridge before earning his PhD at the Sorbonne. His work centers on leadership and democratic innovation.

**Dr. Ikram CHAIRI**

(UM6P)

Machine learning,  
data science



**Dr. Chairi's** research interests focus on data science and machine learning, with a special interest in developing algorithms to treat the anomalies found in raw data. She received her PhD in Machine Learning from University Abdelmalek Essaâdi and did post-doctoral research at the Laboratory of Applied Artificial Intelligence of University Carlos III of Madrid.

**Dr. Fatima Ezzahra BENMARRAKCHI**

(UM6P)

Social cognition  
and computing



**Dr. Benmarrakchi** works in the field of educational technology and special education. She focuses on how the use of technology can improve learning for children with learning disabilities (e.g. Dyslexia) or Autism Spectrum Disorder. She studied at the University of at Chouaib Doukkali (UCD) El Jadida and previously worked as a research associate at UCD in the LAROSERI laboratory.

**Dr. Jose Segovia Martin (UM6P)**

Cognitive Science,  
Computational  
Social Science



**Dr. Segovia Martin's** studies the evolution of collective behaviour. During his PhD he obtained relevant training in computational social science and mathematical engineering: a significant part of his research was developed at the Centre for Language Evolution (University of Edinburgh) and the Laland Lab (University of St.Andrews).

**Dr. Emile SERVAN-SCHREIBER**

(UM6P)

Cognitive science,  
crowd-based  
forecasting



**Dr. Servan-Schreiber's** studies the power of groups to predict and innovate. Earning his PhD at Carnegie Mellon University, he has helped leading companies in Europe and North America harness collective intelligence to forecasts better and decide smarter. Co-creator of the Hypermind prediction platform, he is author of "Supercollectif: la nouvelle puissance de nos intelligences" (Fayard, 2018).

## OTHER MEMBERS OF OUR FACULTY

**Dr. Florencia  
DEVOTO**  
(UM6P)

Development  
economics, education



**Dr. Mark KLEIN**  
(UM6P/MIT)

Data science,  
artificial intelligence



**Dr. James Winters**  
(UM6P)

Collective  
Computation, cultural  
evolution, linguistics



**Dr. Sarah Alami**  
(UM6P)

Anthropology, human  
behavior ecology



**Dr. Ed Seabright**  
(UM6P)

Anthropology,  
evolution of  
political systems



**Dr. Jose Segovia,**  
(UM6P)

Complex systems,  
computer science



**Dr. Brent  
STRICKLAND**  
(UM6P/ENS-Ulm)

Cognitive science,  
core cognition



**Dr. Hugo MERCIER**  
(ENS-Ulm)

Cognitive science,  
collective reasoning



# CURRICULUM

## MASTERS: 1<sup>ST</sup> YEAR

- Programming, Data Science and Statistics 1
- Computer Science Methods in Collective Intelligence 1
- S1 • Cognitive Science 1
- Experimental Methods 1
- Scientific English
- Innovation, Entrepreneurship and Startup Design

- Programming, Data Science and Statistics 2
- Computer Science Methods in Collective Intelligence 2
- Cognitive Science 2
- S2 • Experimental Methods 2
- History and Philosophy of Collective Intelligence
- Facilitation and Organizational Change
- Short internship in first year with Moroccan company, or NGO

## MASTERS: 2<sup>ND</sup> YEAR

- Programming, Data Science and Statistics 3
- Computer Science Methods in Collective Intelligence 3
- S3 • Cognitive Science 3
- Experimental Methods 3
- Political Science and Participatory Governance
- Evidence-based Leadership in Companies

### APPLIED OR SCIENTIFIC INTERNSHIP

S4 At the end of the second year, students will undertake a 6-month internship, acquainting themselves with the job market, and new areas of research.



## EMPLOYMENT OPPORTUNITIES

We aim to prepare our students for a range of professional opportunities in the academic, private, public, and non-profit sectors. Students will develop a range of technical and human skills that qualify them for positions as :

- data scientists, who can understand human perception, manage, and lead organizations.
- information systems or technology management experts, who can lead applied research or launch human-centered technologies.
- human resources or organizational transformation specialists, who use insights from data and cognitive sciences to understand human behavior.

Moreover, we provide opportunities to “learn by doing” as well as networking opportunities so that motivated students come out prepared to thrive in a fast-changing job market.

## Admissions criteria

Candidates must hold a Bachelor's degree (BA) or equivalent. Given the highly interdisciplinary nature of our Master's degree, we are open to all disciplines. Candidates will be evaluated on the basis of their skills and motivation.

## Application requirements\*

- Curriculum Vitae
- Motivation letter
- Two ID photos
- Copy of ID/Passport
- Copy of all diplomas or degree certificates
- Undergraduate transcripts
- Two letters of recommendation

*\*Original documents and / or certified copies will be required at the time of final registration.*

See our in depth FAQ [here](#)



**Duration**  
2 years



**Seats**  
20 students



**Training venue**  
Mohammed VI  
Polytechnic  
University



**Language**  
English (Full  
Time Master's  
degree program)

## Admissions calendar

Would you like to join us?

We invite you to sign up online via the link [my.um6p.ma](http://my.um6p.ma) by completing the requested information or by contacting us at: [CIImaster@um6p.ma](mailto:CIImaster@um6p.ma).

If you are shortlisted, you will be invited to a written competitive examination followed by an oral interview in keeping with the following schedule:

- **March 31** : Application deadline
- **April - May** : Written examination and oral interview
- **June - July** : Admission results and receipt of scholarship application files
- **Septembre** : Start of term

## Selection process

- Application Review
- Written Exam
- Oral Interview

## Scholarships

In line with its civic commitment, UM6P supports the students through an attractive system of academic scholarships and financial aid grants.

## Tuition and fees

- Registration fee : 5.000 Dhs
- Tuition costs : 75.000 Dhs / year

More information on scholarship requirements available [here](#) .

*Tuition covers courses, access to the Language Lab and the Learning Center, access to sporting facilities of UM6P. They do not cover the cost of housing or daily living.*

*More information on accommodation and fees available [here](#) .*

## FOR MORE INFORMATION



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متعددة التخصصات التقنية  
MOHAMMED VI POLYTECHNIC UNIVERSITY  
UNIVERSITÉ MOHAMMED VI POLYTECHNIQUE

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