



ESSEC
BUSINESS SCHOOL

Enlighten. Lead. Change.

MASTER IN FINANCIAL ENGINEERING AND DATA ANALYSIS

ESSEC BUSINESS SCHOOL - AFRICA CAMPUS





Vincenzo VINZI
Dean and President of
ESSEC Business School

ESSEC Business School, a **world-class** institution with **French roots**, consistently ranks among the top global business schools and remains deeply committed to enlightening, driving, and transforming the world.

Aligned with the **pioneering spirit** and humanistic values that have guided us since our founding in 1907, our ambition is embodied in the establishment of international campuses on multiple continents, including Singapore for the Asia-Pacific region since 2015 and Rabat for Africa since 2017.

Africa is a continent of rapid growth, and it's essential for our community to understand its evolving dynamics to better navigate the ongoing transformations. Most importantly, we aim to address the many challenges alongside our African partners. Our **ESSEC Africa campus in Rabat** plays a strategic role in this endeavor, fully integrated into ESSEC's global framework while deeply rooted in the African ecosystem. From this base, we launch numerous collaborative projects across various sectors—from digital transformation to ecological transition and entrepreneurship.

Through the creation of **cutting-edge knowledge**, a distinct and recognized educational approach, and the support of businesses and organizations in generating value for all, our mission is clear: to give purpose to tomorrow's leadership by equipping individuals to tackle today's economic, environmental, and social challenges.



Hugues LEVECQ
Deputy Dean
of ESSEC Business School
Africa Campus

Since its inauguration in 2017, the ESSEC Africa campus in Rabat has seen remarkable progress. In just a few years, we have educated hundreds of students, welcomed numerous companies into our executive education programs, established partnerships with leading economic and social stakeholders, and launched the Innovation and Digital Management track within the Global Bachelor of Business Administration in collaboration with École Centrale Casablanca.

Our strategy for the coming years is built on three pillars: Connect, Train, Impact.

Connect. Our campus, with its strong international orientation, brings together a diverse mix of talents and perspectives from our campuses in Cergy and Singapore, as well as from Moroccan and African education systems. Every day, our students and executive education professionals benefit from exceptional learning conditions within a state-of-the-art campus set in a privileged environment between the countryside and the ocean.

Train. Our educational offerings, aligned with the highest international standards, challenge our students and professionals to engage with key future issues facing the African continent, with a particular focus on transitions, entrepreneurship, and the digital revolution, while also addressing creative cultural industries and equal opportunities. Every day, our students and executive education professionals benefit from exceptional learning conditions within a state-of-the-art campus set in a privileged environment between the countryside and the ocean.

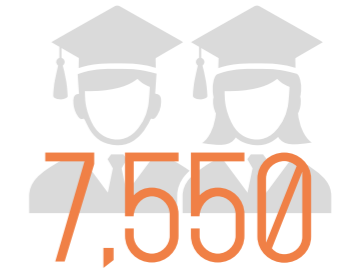
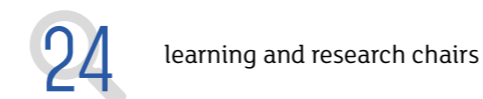
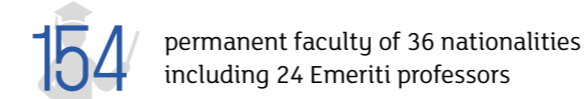
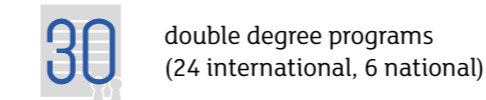
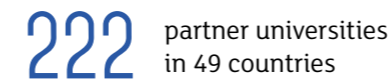
Impact. Today, our goals for the campus's development are ambitious: to multiply our academic partnerships across the continent, strengthen our presence in the pan-African economic landscape, and become a hub of attraction for international students eager to understand the key challenges of tomorrow's Africa. This roadmap reflects our optimistic and enthusiastic vision: to build bridges between Africa and the rest of the world in a continuous quest for meaningful impact for all our stakeholders.

Key figures



campuses in
Cergy, Paris-La Défense,
Singapore and Rabat

augmented
digital
campus



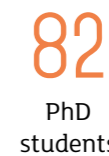
students in full-time undergraduate
and graduate programs



international
students



nationalities
represented



PhD
students



student
organizations



managers in executive education

EDITORIAL



Mohamed NDAOUD
Associate professor in the IDS department at ESSEC, PhD in statistics from the école polytechnique and member of the CREST laboratory at ENSAE.

In an increasingly VUCA - Volatile, Uncertain, Complex, and Ambiguous - world, financial institutions and corporate finance departments are facing challenges such as accelerating digitalization, increasing cybersecurity risks, the growing importance of data, the emergence of generative AI, and the climate emergency and sustainability issues. These challenges are reshaping finance and technology professions and the talents expected by industry players.

The Master in Financial Engineering and Data Analysis is designed to train high-level executives in finance and economic data analysis. The program combines teaching, hands-on experience, lectures, experiments, and internships, providing students with the knowledge and tools to understand complex corporate finance issues, make data informed decisions, and implement effective financial strategies involving data analytics.

This program prepares young professionals to join private or public companies and assume positions of responsibility in finance with an international dimension.

As a student in the Master in Financial Engineering and Data Analysis at ESSEC Business School, you'll benefit from a transformative educational experience that equips you with the technical, interpersonal, and communication skills needed to reach your full potential as a leader.

CRAFT THE FUTURE OF FINANCE WITH DATA-DRIVEN INSIGHTS

- Acquire advanced expertise in financial engineering and data analysis.
- Master cutting-edge tools and techniques to solve complex financial challenges.
- Prepare for leadership roles in top financial institutions worldwide.
- Gain a chance to mix with a highly diverse teaching faculty.

KEY FACTS

- 2 years program
- Learning expeditions for an on-the-ground experience
- Taught in English
- 1 Professional Thesis with an ESSEC professor
- Consulting mission
- Courses by seasoned professionals
- Hackathon



HIGHLY QUALIFIED FACULTY

It blends academic and professional perspectives for teaching excellence, with the majority of lecturers holding a Ph.D, thus being experts in their field, and standing for more than 36 different nationalities.

In addition to the faculty of ESSEC Business School, the program also relies on visiting scholars and seasoned professionals who bring their business expertise to the class, continuously challenging students on fundamental business issues. It also includes companies that are responsible for a given course.

EXCELLENCE

Students are offered a range of fundamental, core, specialized courses and seminars that align with their career goals. Language courses of French, Mandarin or English have to be validated.

AN INTERNATIONALLY FOCUSED PEDAGOGY

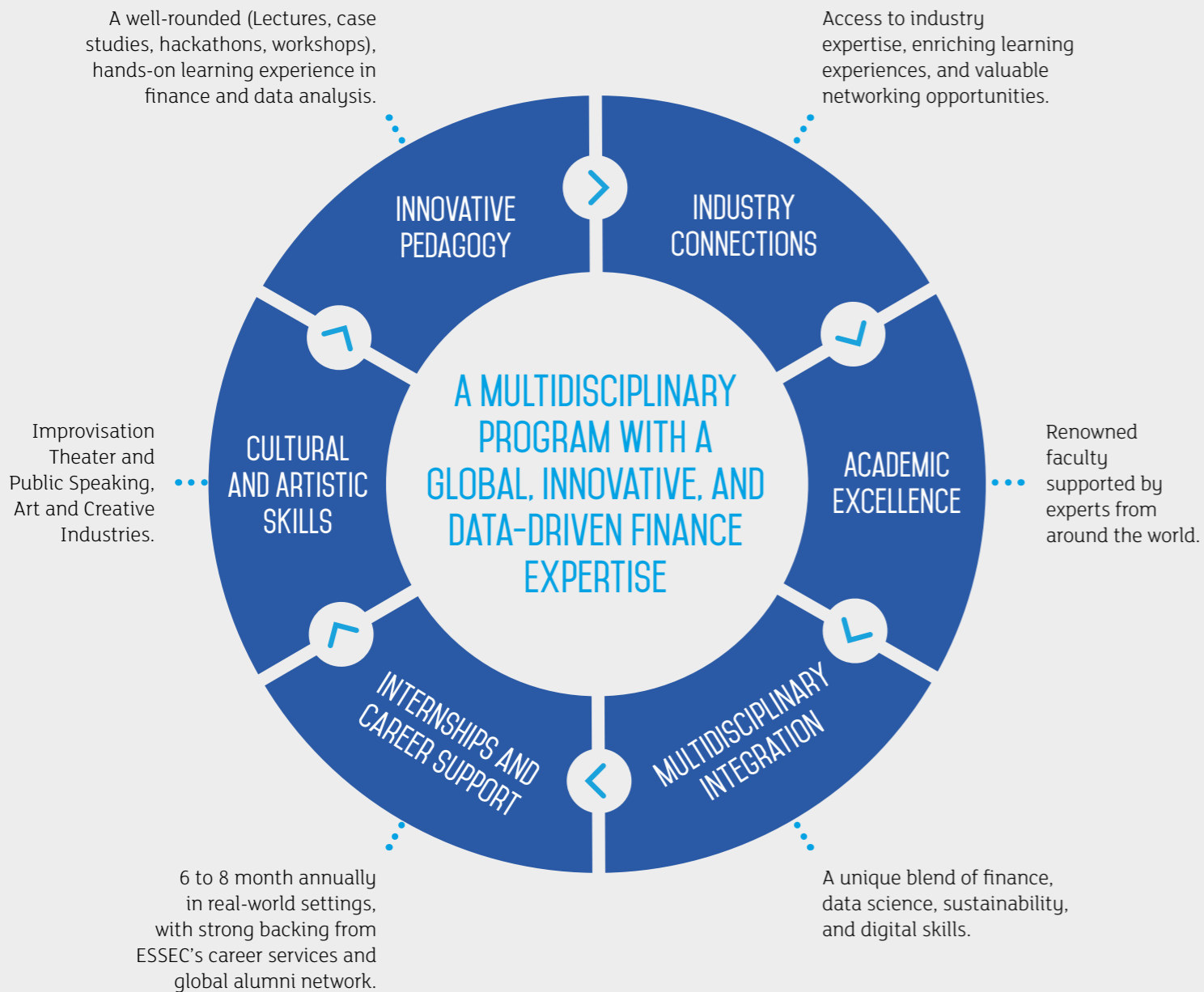
The program relies on a wide range of learning methods including lectures, case studies, international business simulations, role playing, interactive seminars, field work and individual/team projects.



INTEGRATION OF FINANCE AND DATA SCIENCE

The Finance Engineering and Data Analysis program at ESSEC Business School - Africa Campus equips students with a unique blend of financial and data science skills. This integration empowers students to master traditional finance techniques while applying advanced data analytics for informed decision-making in a data-driven world. By merging these disciplines, the program prepares graduates to excel in roles requiring both financial acumen and technological expertise, making them highly sought after in the global job market.

PROGRAM STRENGTHS



A CONNECTED AND ENRICHING JOURNEY

		SEMESTER 1			
PROFESSIONAL CONFERENCES AND COMPANY VISITS	HACKATHON	LEARNING EXPEDITIONS	Finance <ul style="list-style-type: none"> Financial theory Financial Management Portfolio management Financial risk management and derivatives Accounting and International financial Reporting Standards Performance and strategic cost Management 	Data Analysis <ul style="list-style-type: none"> Statistical inference Optimisation & Algorithms 	Personal & Professional skills <ul style="list-style-type: none"> Business English Spanish Research Methodology Transformational seminar: Leadership and Teamwork
			SEMESTER 2		
			Finance <ul style="list-style-type: none"> Financial diagnosis Financial Consulting mission Company valuation M&A and IPO Risk management and governance Sustainable finance and ESG performance 	Data Analysis <ul style="list-style-type: none"> Time series and Forecasting Data visualization Python for machine learning 	Personal & Professional skills <ul style="list-style-type: none"> Business English Spanish Financial information systems Digital transformation and IS project management
			SEMESTER 3		
			Finance <ul style="list-style-type: none"> International finance international taxation Project Management and Business Plan Entrepreneurship, and new business development Climate finance FinTech & Cryptoassets 	Data Analysis <ul style="list-style-type: none"> Big Data Analytics Reinforcement learning Supervised Learning Graphs & Networks, clustering Digitalization of fi markets and HF trading 	Personal & Professional skills <ul style="list-style-type: none"> Business English Spanish The art of public speaking Cultural and Creative Industries
SEMESTER 4					
			<ul style="list-style-type: none"> Internship Master thesis Business ethics Preparing your professional onboarding 		





HELPING YOU GET STARTED

CAREER SERVICES

Ongoing career orientation and support is provided to help students find suitable positions upon graduating. These services include personal development coaching which has been designed to help students capitalize on their skills and experience, so they become conscious of their assets. By defining a personal strategy to market their skills, students and graduates optimize their chances of succeeding on their chosen career path.



GRADUATES FIND POSITIONS IN VARIOUS INDUSTRY SECTORS

- ▶ **Investment Banking:** Corporate Finance, Mergers & Acquisitions
- ▶ **Asset Management:** Portfolio Management, Risk Analysis
- ▶ **Financial Services:** Retail Banking, Insurance, FinTech
- ▶ **Consulting:** Financial Advisory, Risk Management, Strategy Consulting
- ▶ **Corporate Finance:** Treasury, Financial Planning & Analysis
- ▶ **Technology & Data Science:** Big Data Analytics, FinTech, AI & Machine Learning
- ▶ **Sustainable Finance:** ESG, Climate Finance, Impact Investing
- ▶ **Entrepreneurship:** Startups, Venture Capital, Business Development



A GLOBALLY CONNECTED ALUMNI COMMUNITY

A POWERFUL NETWORK

Becoming part of the ESSEC Alumni network means joining a vibrant, global community that extends far beyond graduation. With over 70 active chapters in major capital cities around the world, ESSEC Alumni isn't just about staying connected—it's about opening doors to new opportunities, fostering lifelong relationships, and driving career growth in every industry. Whether it's through exclusive events, tailored career services, or industry-specific networking opportunities, our alumni enjoy unparalleled support and connection across all business sectors. From New York to Singapore, and Paris to Rabat, our network ensures that no matter where your career takes you, you'll always have a powerful community by your side, helping you to thrive in today's dynamic business landscape.

Be part of ESSEC's dynamic worldwide network of excellence



71,000
ESSEC ALUMNI MEMBERS

With over 70 chapters in major capital cities, ESSEC Alumni offers a wide range of services and organizes special events throughout the year all over the world and in all business sectors, as well as giving career advice to graduates.



WHO CAN APPLY?

The Master in Financial Engineering and Data Analysis is designed for students with a strong analytical mindset and a passion for finance who are eager to develop advanced technical skills in data analysis, corporate, and quantitative finance and risk management.

A 3-year Bachelor Degree or a Licence with a background in Economics, Management of Mathematics and engineering

▶ Tuition fees : 80 000 MAD / year

SCHOLARSHIP OPPORTUNITIES

Students have the chance to apply for scholarships that can cover up to 50% of tuition fees. Awards are based on academic performance, leadership potential, and other key credentials, providing financial support throughout the 2-year program. Take advantage of this opportunity to invest in your future with reduced financial burden!



HOW TO APPLY?

Selection is based on an excellent academic record as well as a strong motivation to pursue the Financial Engineering and Data Analysis program. A complete application includes:

- ▶ An online application file with supporting documents
- ▶ A recent English proficiency test score (TOEIC, TOEFL, IELTS, Cambridge, or Duolingo)
- ▶ An interview

YOU WANT TO KNOW MORE ABOUT THE MASTER IN FINANCIAL ENGINEERING AND DATA ANALYSIS?



Join us on
<https://essec.myapply.online/>

4 INTERNATIONAL CAMPUSES

THE CERGY CAMPUS

Welcome to ESSEC Business School's original campus located only 35 minutes away from Paris.

ESSEC established its original campus in this student haven in 1973. Set in a vast green space covering 2,000 hectares, the campus features the very best teaching tools: auditoriums equipped with facilities, libraries rooted in the digital era, language labs, etc. It is also a convivial site with places to eat, student residences, sports facilities, practical services, and more.

THE PARIS-LA-DÉFENSE CAMPUS

At the heart of Europe's leading business district, this ESSEC campus is adapted to the time constraints and targeted needs of working managers.

This campus, housed in the well-known CNIT building, is specifically dedicated to our executive education programs. Thanks to its strategic location, spaces for group work, connectivity, areas for relaxing, reading and getting together, it offers the perfect conditions for educating managers and executives.

THE SINGAPORE CAMPUS

Midway between India and China, Singapore boasts the ideal location to get a global vision of Asia.

Singapore has always been in the vanguard of Asian development and continues to attract multinationals from all over the world. Since 2005, ESSEC's third campus has been ushering its students into the heart of a major economic, commercial and financial crossroads, offering an ideal platform for understanding the forces, complexity, diversity and challenges of a key region in the 21st century. In January 2015, ESSEC welcomed students to its new 6500 m² campus.

THE RABAT CAMPUS (MOROCCO)

Fully assimilated to its environment, the ESSEC Africa campus works with Moroccan and African leaders to address the continent's economic, cultural and social challenges.

Baptized ESSEC Africa, this 6,000 m² campus, idyllically located in Sidi Bouknadel, is home to ESSEC's academic activities: undergraduate, graduate and executive education programs, a business incubator and research activities conducted in partnership with top-level Moroccan academic institutions.



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