



Master Finance

**Dual degree program with
Ca' Foscari University of Venice**

Dear candidate,

Aix-Marseille School of Economics promotes the idea of students acquiring international experience throughout their academic journey. This can be achieved through various avenues, including participating in a dual degree program. The advantages of such international experiences are indisputable.

One of the key benefits is the opportunity to gain fresh perspectives. Experiencing education and life in a different country allows students to broaden their worldview, fostering a more comprehensive understanding of global issues and diverse cultural practices. This exposure to new ideas contributes significantly to personal and intellectual growth.

Moreover, engaging with a different academic culture can be intellectually enriching. Experiencing diverse teaching methods, research approaches, and academic environments can enhance a student's skill set and provide a well-rounded education. It encourages adaptability and flexibility, qualities that are increasingly valuable in our interconnected and rapidly changing world.

Beyond the academic realm, international experiences contribute to the expansion of personal and professional networks. Interacting with individuals from diverse backgrounds not only enhances cultural competence but also creates connections that can be valuable in both personal and professional spheres. Building a global network can open doors to future collaborations, career opportunities, and a deeper understanding of the interconnectedness of the academic and professional landscape.

In essence, Aix-Marseille School of Economics recognizes the multifaceted advantages of international experiences for students.

Best regards,

Karine Gente

Professor of Economics

Vice Dean International Relations

● What is a dual degree?

A dual degree is a distinctive dual program that offers you the opportunity to:

- Study at two prestigious universities.
- Obtain two diplomas.
- Cultivate a unique differentiator for your CV.
- Spend the first academic year abroad and the second year at AMSE.
- Engage in programs taught exclusively in English.

● Why choose a dual degree?

Opting for a dual degree presents a multitude of advantages:

- Immerse yourself in new academic experiences and elevate your intellectual prowess.
- Expand your horizons through increased cultural and social exposure.
- Delve into a new business environment and broaden your understanding.
- Foster valuable connections worldwide for future professional collaborations.
- Spend a full academic year in an outstanding city and renowned school.
- Become an integral part of a diverse and inclusive international community.
- Equip yourself with the tools for a successful international career.

● How does it work?

- Eligibility: Students must hold a 180 ECTS Bachelor's degree and a letter from the English teacher certifying level B2.
- Duration: Four semesters (two years).
- Language: English.
- Accreditation: 120 ECTS.
- The M1 takes place in Italy, Venice, Ca' Foscari University of Venice.
- The M2 takes place in France, Marseille, AMSE/Aix-Marseille Université.

Curriculum

Master 1, choose 1 track among 2

Track Quantitative Finance and Risk Management

Courses - Semesters 1 and 2	ECTS
Financial Economics	12
Econometrics	6
Economics of risk and agent behaviour	6
Risk measurement	6
Corporate banking and credit analysis	6
Derivatives and insurance	12
Statistical models and methods for finance	12
Stochastic calculus for finance	6
Financial reporting	6
Macroeconomics 1	6

Track Sustainable Finance

Courses - Semesters 1 and 2	ECTS
Econometrics	6
Financial Economics	12
The economics of climate change	6
Corporate banking and credit analysis	6
Advanced instruments for sustainable finance and impact financing	12
Advanced corporate finance and sustainable corporate strategy	12
Economics of risk and agent behaviour	6
Macroeconomics 1	6

Master 2, choose 1 track among 3

Track Financial Modelling (MF)

Courses - Semester 3	ECTS
BCC 1 : Etre capable de modéliser et mesurer les risques financiers	
Risque et modélisation / Risk and modeling	6
Risque et décision / Risk and decision	
Modélisation des risques financiers / Financial risks modeling	
Mesures de risque / Risk measures	6
Modèles de risque de crédit / Credit risk models	
Econométrie de la finance / Financial econometrics	
Econométrie de la finance (Heures supplémentaires) / Financial econometrics (overtime hours)	
BCC 2 : Etre capable de construire une stratégie financière	
Stratégie d'investissement / Investment strategie	9
Finance d'entreprise / Corporate finance	
Gestion de portefeuille / Portfolio management	
Finance appliquée / Applied finance	
BCC 4 : Etre capable de problématiser et de présenter une mission dans un contexte professionnel	
Problèmes financiers contemporains / Current financial problems	6
Economie, finance et crises / Economics, finance and crises	
Finance durable / Sustainable cinance	
Projet de fin d'étude / Final year project in finance	3
Projet de fin d'étude en finance / Final year project in finance	
Courses - Semester 4	ECTS
BCC 4 : Etre capable de problématiser et de présenter une mission dans un contexte professionnel	
Professionnalisation et communication / Soft skills	2
Ateliers de professionnalisation et engagement / Professional training	
Stage ou alternance (mémoire et soutenance) / Internship (report & defense)	19
Soutenance de stage ou d'alternance / Internship defense	
BCC 3 : Etre capable de valoriser un produit financier	
Une UE au choix parmi / One unit among 3	
Mathématiques financières / Financial mathematics	9
Calcul stochastique / Stochastic calculus	
Modèles de volatilité / Volatility models	
Modèles de taux / Fixed income models	
Financement / Financing	9
Financement structuré / Structured finance	
Financement de projet / Project finance	
Ateliers en financement d'entreprise / Workshop on corporate finance	
Actuariat / Actuarial science	9
Economie de l'assurance / Insurance economics	
Actuariat 1 / Actuarial science 1	
Actuariat 2 / Actuarial science 2	

Track Financial Risks and Sustainable Finance (R2FD)

Courses - Semester 3	ECTS
BCC 1 : Etre capable d'évaluer et gérer les actifs financiers de manière durable	
Evaluation d'actifs financiers / Financial Assets Valuation	6
Pricing d'options / Derivation pricing	
Obligation verte et produits structurés / Green bonds and structured products	
Projet de fin d'études en finance / Final year project in finance	
Gestion d'actifs financiers / Financial asset management	6
Gestion de portefeuille et mesures de performance / Portfolio management and performance measures	
Allocation d'actifs et décarbonisation / Asset allocation and decarbonisation	
BCC 2 : Etre capable de mesurer et gérer les risques financiers et climatiques	
Mesures de risque / Risk measures	6
Modèles de risque marché / Market risk models	
Modèles de risque de crédit / Credit risk models	
Econométrie de la finance / Financial econometrics	
Gestion des risques financiers / Financial risk management	6
Risque et conformité / Risk and compliance	
Gestion obligataire et risque de taux / Bond management and interest rate risk	
Gestion du risque climatique / Climate risk management	
BCC 3 : Etre capable de construire une stratégie financière incluant des critères de durabilité	
Financement / Financing	6
Analyse financière et extra-financière / Financial and extra-financial analysis	
Financement structuré / Structured finance	
Finance durable / Sustainable finance	
Courses - Semester 4	ECTS
BCC 3 : Etre capable de construire une stratégie financière incluant des critères de durabilité	
Techniques numériques en finance / Numerical methods in finance	6
Méthodes d'optimisation en finance / Optimization methods in finance	
Finance computationnelle et gestion d'actifs / Computational finance and asset management	
BCC 4 : Etre capable de problématiser et de présenter une mission dans un contexte professionnel et de mener à bien un travail de recherche	
Mémoire et stage / Master thesis and internship	24
Research methodology / Méthodologie de la recherche	
Atelier de Professionnalisation / Professional training	
Mémoire appliqué ou de recherche / Applied or research thesis	
Grand oral / Oral exam	

Track Research in Finance

Courses - Semester 3	ECTS
BCC 1 : Etre capable d'utiliser les méthodes de la science des données et des mathématiques à des fins diagnostiques et prédictives	
Econométrie et mathématiques appliquées / Econometrics and applied mathematics	8
Visualisation de données pour l'analyse économique / Data visualisation for economic analysis	
Econométrie approfondie / Advanced Econometrics	
Economie des réseaux / Network Economics	
BCC 2 : Etre capable de mobiliser des savoirs économiques et financiers théoriques et appliqués pour effectuer de la modélisation économique et financière	
Tronc commun en Economie / Core Classes in Economics	6
Macroéconomie approfondie / Advanced Macroeconomics	
Microéconomie approfondie / Advanced Microeconomics	
Analyse Economique et Financière (2 ECUE au choix) / Economic and Financial analysis (choose 2 among 4)	6
Theorie des jeux II / Game theory II	
Décision publique / Public Decision	
Finance d'entreprise approfondie / Advanced Corporate Finance	
Processus Stochastique et Application / Stochastic Processes and Application	
BCC 3 : Etre capable de concevoir, conduire et communiquer autour d'un projet de recherche en maîtrisant les outils économiques, financiers et économétriques appropriés	
Enseignements spécialisés / Specialised Classes	6
Méthodes de réduction de l'information / Methods for information reduction	
Séries temporelles / Time Series	
Introduction à la recherche / Introduction to research	4
Questions de recherche / Research Questions	
Ateliers de professionnalisation / Professional Training	
Courses - Semester 4	ECTS
BCC 2 : Etre capable de mobiliser des savoirs économiques et financiers théoriques et appliqués pour effectuer de la modélisation économique et financière	
Modélisation des marchés (2 ECUE au choix) / Market modelling (choose 2 among 4)	8
Macroéconomie dynamique / Dynamics Macroeconomics	
Cycles macroéconomiques / Macroeconomic Cycles	
Gestion de portefeuille empirique / Empirical Portfolio Management	
Sujets avancés en finance / Advanced Topic in Finance	
BCC 3 : Etre capable de concevoir, conduire et communiquer autour d'un projet de recherche en maîtrisant les outils économiques, financiers et économétriques appropriés	
Méthodologie et Mémoire de recherche / Research methodology and master thesis	22
Méthodologie de la recherche / Research methodology	
Mémoire de recherche ou stage de fin d'études / Master thesis or internship report	



Contacts

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AMSE is a department of the Faculty of Economics and Management, within Aix-Marseille Université.

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