Financial globalization and new market developments have given rise to new requirements in risk management, asset management, derivatives pricing and hedging. Financial institutions require specialists with an understanding of complex financial strategies and modeling skills, with computational expertise and practical know-how. At the same time they need associates who can grasp the significance of financial operations in the bigger picture. The Master in Financial Engineering (MFE) at EPFL is designed to meet these demands.

The MFE is right for you if you have a solid analytical background and want to challenge your intellectual capacity. The program invites you to think of innovative ways to combine modern finance theory and computational methods with the practical demands of modern financial institutions. You will gain a solid understanding of investments, credit risk and fixed income analysis, derivative securities valuation, structuring and hedging, risk management and corporate finance. Most importantly, however, you will learn to place these tools in context, to think beyond financial models and to question the underlying assumptions.

Led by the Swiss Finance Institute at EPFL, the program also benefits from the experience of renowned faculty members from other departments – including, Computer Science, and Operations Research. As a result, MFE courses are anchored in both the latest research and the best practices in financial engineering.

At the end of your studies, you will have the perfect profile to start your career in a commercial or investment bank, a hedge fund, a rating or consulting company, an insurance company or a trading firm. You will be able to apply your knowledge of cutting-edge techniques and your practical know-how to arrive at well-balanced and sound financial decisions. If you are interested in an academic career, the MFE is also an ideal stepping stone to join a top-level PhD program in finance such as the SFI doctoral program at EPFL.

“Linking engineering to finance while taking advantage of EPFL’s reputation, the MFE at EPFL is recognized in the market as a cutting-edge Master degree. I was impressed by the academic level of the MFE professors and the quality of their courses which are developed using the results of state-of-the-art finance theories. During the group projects, I shared and learned from smart international classmates. Thanks to the MFE, I was able to find a great position at Nestlé Capital Management Ltd. and I am very confident for the future of my career.”
The Master in Financial Engineering is an intellectually stimulating two-year program that bridges the gap between industry practice and the latest academic thinking. The curriculum includes both foundation and advanced courses as well as a broad range of electives that allow you to tailor the program to your specific areas of interest. A mandatory 6-month internship in the financial industry, combined with a master thesis, concludes the program.

**Examples of Electives**
- Quantitative Risk Management
- Advanced Topics in Financial Econometrics
- Global Business Environment
- Mathematical Modeling of Behavior
- Private Equity
- Securitization and the Financial Crisis
- Computational Game Theory

**Examples of Foundation and Advanced Courses**
- Introduction to Finance
- Investments
- Financial Econometrics
- Stochastic Calculus I and II
- Derivatives and Advanced Derivatives
- Fixed Income Analysis
- Credit Risk
- Macroeconomics
- Real Options and Financial Structuring
- Behavioral Finance

**Internship and Master Thesis**
As an integral part of your studies, you will be required to spend a period of 25 weeks as an intern in the financial and/or insurance industry. During this time you will work on a research topic and you will write a master thesis under the joint supervision of your supervisor in the company and one member of the MFE faculty acting as academic advisor. The internship provides you with an opportunity to put the theory into practice, to expand your work experience, to practice your skills in applying for a job and to establish contacts within the financial industry.
There is a growing choice of exciting Master programs, so why come to EPFL to do a Master in Financial Engineering?

**Intellectually Stimulating**
EPFL is a top-ranked research and teaching institution that attracts some of the best intellects in the world to its idyllic campus overlooking Lake Geneva and facing the Alps. The MFE at EPFL is a young and dynamic program taught by a internationally renowned faculty. The small class size of approximately 30 to 40 students allows stimulating discussions with the faculty and among students.

**Analytical Minds**
MFE graduates get to see the bigger picture and learn to think beyond short-term results of financial operations and models. While equipping students with cutting-edge techniques and skills to excel in a dynamic financial environment, our faculty also seeks to foster a wider understanding of the environment in which you will operate and of the potential consequences of your business decisions.

**Industry Footing**
The MFE is taught by thought leaders who bring innovative ideas to the financial industry and both policy makers. Our faculty is well connected and sought-after at conferences, for talks and as contributors to the financial pages of newspapers. To broaden practical relevance to the coursework, a Practitioner Seminar Series is organized with invited speakers from associated fields in the industry.

**Diversity**
The MFE is built on the quality and diversity of our students, whose broad range of experiences and backgrounds fosters a distinctively collaborative community culture. 75% of the class students are international and several nationalities are represented on the MFE program.

**Leverage Networks**
As an MFE graduate, you will not only acquire the tools to create and navigate opportunities successfully throughout your career, but also benefit from the powerful EPFL alumni network and the strong links with Swiss Financial institutions through the Swiss Finance Institute.

**Requirements**
- Bachelor’s degree in a technical discipline such as Mathematics, Physics, Computer science, Engineering or Economics
- Fully at ease with computers. In particular, you should command either one programming language such as C, C++ or Java, or an interpreted language such as Matlab (Octave, Scilab) or Mathematica.
- Fluent in English. Success in an international examination of English such as the TOEFL is a plus but not mandatory for admission to the MFE.
- For complete admissions requirements, visit [http://sfi.epfl.ch/mfe/admissions](http://sfi.epfl.ch/mfe/admissions)

**Deadlines**
Applications can be submitted online (mfe.epfl.ch) twice every year, from November 1 to January 15 and from February 15 to April 15.

If you need a visa to study in Switzerland, we recommend that you apply for the January deadline in order to allow for the completion of the visa procedure, which can take up to 3 months.

---

**Yankai Shao**  
MFE 2011  
Investment Analyst at the Fixed Income and Currencies department at Lombard Odier Darier Hentsch & Cie.

“The curriculum is well-designed and linked to finance both academically and practically. The MFE has brought me much more than just a comprehensive understanding of quantitative finance; it has taught me powerful tools to solve complex financial problems and given me solid theoretical foundations. In addition, it gave me the best attitude to confront difficulties, and, even more importantly, taught me the spirit of teamwork. This MFE was an excellent bridge to my professional career. Within the first few days of joining the bank, I could directly start my project and work together within an international team thanks to the skills I acquired in the MFE at EPFL.”