Scientific Preparation Programme  
(M.Sc.)
IAM 527 Advanced Calculus and Integration  
IAM 591 Programming Techniques in Applied Mathematics I  
IAM 592 Programming Techniques in Applied Mathematics II

M.S. Thesis Program
IAM 520 Financial Derivatives  
IAM 522 Stochastic Calculus for Finance  
IAM 524 Financial Economics  
IAM 541 Probability Theory  
IAM 500 M.S. Thesis (non-credit)  
IAM 590 Graduate Seminar (non-credit)  
IAM 698 Ethics and Research (non-credit)  
4 elective courses

M.S. Non-Thesis Program
IAM 520 Financial Derivatives  
IAM 521 Financial Management  
IAM 522 Stochastic Calculus for Finance  
IAM 524 Financial Economics  
IAM 541 Probability Theory  
IAM 589 Term project (non-credit)  
IAM 590 Graduate Seminar (non-credit)  
IAM 698 Ethics and Research (non-credit)  
5 elective courses

Ph.D. Program
BA5814 Investment Management  
IAM 614 Methods of Computational Finance  
IAM 615 Advanced Stochastic Calculus for Finance  
IAM 600 Ph.D. Thesis (non-credit)  
IAM 690 Graduate Seminar (non-credit)  
IAM 698 Ethics and Research (non-credit)  
4 elective courses

Ph.D. on B.Sc. Degree
IAM 520 Financial Derivatives  
IAM 521 Financial Management  
IAM 522 Stochastic Calculus for Finance  
IAM 524 Financial Economics  
IAM 541 Probability Theory  
BA5814 Investment Management  
IAM 614 Methods of Computational Finance  
IAM 615 Advanced Stochastic Calculus for Finance

IAM 590 Graduate Seminar (non-credit)  
IAM 600 Ph.D. Thesis (non-credit)  
IAM 690 Graduate Seminar (non-credit)  
IAM 698 Ethics and Research (non-credit)  
6 electives courses

Elective Courses
IAM 525 Game Theory  
IAM 526 Time Series Applied to Finance  
IAM 529 Applied Nonlinear Dynamics  
IAM 530 Elements of Probability and Statistics  
IAM 550 Portfolio Optimization  
IAM 554 Interest Rate Models  
IAM 557 Statistical Learning and Simulation  
IAM 566 Numerical Optimization  
IAM 572 Finite Elements: Theory and Practice  
IAM 612 Financial Modelling with Jump Processes  
IAM 664 Inverse Problems  
IAM 665 Advanced Continuous Optimization  
IAM 672 Control and Optimization of Differential Equations

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Why Study Financial Mathematics?
Financial Mathematician as a profession has consistently been rated one of the top jobs in many countries. Financial Mathematicians are always in demand as long as financial decision making is crucial. They participate in high-level business decision-making in every industry and are the backbone for companies in financial sector.

Importance of Financial Mathematics
Financial Mathematics develops an understanding of the fundamental probability tools for quantitatively modeling the financial tools and demonstrates an ability to apply these tools to problems encountered in finance.

Turkey has encountered a risky financial environment due to its growing economy with abridging west and east economies which makes the country a financial hub in the Middle East. Economic growth forces Turkey to improve its financial markets to develop present financial instruments. This requires the need for broad analysis of financial markets and instruments, and to have well-educated analysts to deal with modelling and development of strategies.

Objectives of the Program
Better understanding of financial dynamics to derive and extend the mathematical or numerical models. Assessment and modelling of financial risk, credit risk, operational risk and actuarial risk to analyze and evaluate financial assets are some of the unique abilities financial mathematics bestow. The students are educated to gain ability to identify, quantify, assess and manage the risk uncertainty for real life problems using financial tools.

Suitable for Students from all Disciplines
Empirical research with strong mathematical background, practical applications of advance mathematics, finance, risk management and risk analysis to contribute to the advancement of financial mathematics.

The program is suitable for all students having degree from Faculty of Sciences, Faculty of Economics and Administrative Sciences and Faculty of Engineering. Financial Mathematics is a multidisciplinary program providing a balanced training in the financial and advanced mathematical analysis. It focuses on mathematical model-building in the various specialized fields of finance: exchange, energy market, future and forward market, derivatives market, financial risks, hedging strategies.

A Financial Mathematics degree makes you compatible in Mathematics, Statistics, Economics, Finance and as well as in other subjects.

Job Opportunities
Financial Mathematics is highly desirable in management positions because of their multidisciplinary background and strong quantitative emphasis. The program has given 18 Ph.D., 133 M.Sc. degrees. Our graduates mostly are employed by Central Bank of the Republic of Turkey (TCMB), Banking Regulation and Supervision Agency (BDDK), Private Banks, Republic of Turkey Energy Market Regulatory Authority (EPDK), The Scientific and Technological Research Council of Turkey (TÜBİTAK), Turkish Statistical Institution (TÜİK), Minister of Health of the Republic of Turkey, Borsa İstanbul, ASELSAN.

Admission Requirements and Application
- METU-EPE (English Proficiency Exam) ≥ 64.5 or TOEFL-IBT ≥ 79
- M.Sc.: ALES ≥ 70 or GRE-quant. ≥ 155 (≥ 696)
- Ph.D.: ALES ≥ 75 or GRE-quant. ≥ 156 (≥ 713)
- At least 2 reference letters
- Letter of intention

Application Deadlines to the Program and EPE are usually in June. We strongly recommend you to follow the deadlines from the link given below.

Applicants will be interviewed when necessary.

For application deadline and more information: http://iam.metu.edu.tr/universitys-application-page

FACULTY
KESTEL, A. Sevtap
SEZER, A. Devin
UĞUR, Ömür
YOLCU-OKUR, Yeliz

AFFILIATED FACULTY
AYAYDIN, Hande: Business Administration, METU
BATMAZ, İnci: Statistics, METU
DANIŞOĞLU, Seza: Business Administration, METU
GAYGISIZ, Esma: Economics, METU
GÜNER, Nuray: Business Administration, METU
HAYFAVİ, Azize: Mathematics, METU
İLK-DAĞ, Özlem: Statistics, METU
KALAYCI, Erkan: EWE Energy
KORN, Ralf: Technical University Kaiserslautern
KÜÇÜKÖZMEN, Coşkun: International Trade and Finance, İzmir University of Economics
OMAY, Tolga: Economics, Atılım University
TALASLI, İrem: T.R. Central Bank
TALU-YOZGATLIGİL, Ceylan: Statistics, METU
UZUNKAYA, Mehmet: T.R. Ministry of Development
VARDAR-ACAR, Ceren: Statistics, METU
WEBER, Gerhard-Wilhelm: Marketing and Economic Engineering, Poznan University
YILDIRAK, Kasırga: Actuarial Sciences, Hacettepe University