



Department of Industrial Engineering & Logistics Management

Financial Engineering @ IELM



Financial engineering (FE) is a multidisciplinary field where engineering methodologies and quantitative tools are applied to solve various financial problems arising in practice. Financial engineering is critical to Hong Kong's development in its role as a major international financial center and the largest offshore center for renminbi investment.

Financial Engineering Option in IELM

IELM will offer the Financial Engineering Option to prepare students who aspire to build a career in finance-related areas in industry or pursue a further degree in FE. With the aims of training students to apply industrial engineering and operations research techniques to build financial models and to make use of engineering methodologies to solve finance-related problems quantitatively, FE option will equip students with foundational knowledge including derivatives pricing, portfolio management, financial data analysis, and risk management in various financial markets.

The FE option is open exclusively to students of a major offered from the IELM department. To successfully complete the option, students must complete 12 credits in addition to their normal degree requirements, made up of the following courses:

Required Courses

- IELM 3250 Operations Research II
- IELM 3330 Introduction to Financial Engineering

Electives

- FINA 3103 Intermediate Investments
- ISOM 4530 Statistical Analysis of Financial Data in R/S-plus
- RMBI 4210 Quantitative Methods for Risk Management

As a student of IELM, you will have studied various prerequisites of these courses, covering topics including Probability and Statistics, Deterministic and Stochastic Operations Research, Systems Simulation, and Engineering Economy.



Website: <http://www.ielm.ust.hk>

Tel: 2358 - 7100



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Research

The Financial Engineering Laboratory in IELM is equipped with hardware and software to give practical experience with efficient quantitative and computational methods for problem solving in financial investment and risk management. Students can practice using computational tools together with information technology to study topics such as investor behavior, pricing models, etc.

The laboratory is also designed to teach students how financial institutions apply financial technologies and risk management strategies.

Bright Career Prospects

Many graduates of IELM are already working in leading financial institutions, including HSBC, Goldman Sachs, JP Morgan, Morgan Stanley, UBS, Hang Seng Bank, Citibank, etc.

In these companies, our graduates hold a diverse set of jobs including business analysts, IT associates, compliance officers, associate directors, etc.

Alumni in Investment Banking

★ **Ms. Daisy LI**

Equity Research Associate, Morgan Stanley
Dual Degree Program in IEEM (Class of 2013)

★ **Ms. Flora SUN**

Technology Graduate Trainee, UBS
BEng in IELM (Class of 2014)

★ **Mr. Yang YANG**

Associate, Strats & Modeling,
Morgan Stanley, New York
BEng in IELM (Class of 2010)

★ **Mr. Quentin TSUI**

Analyst, Technology, Media and Telecommunication,
Corporate & Investment Banking, Deutsche Bank
BEng in IEEM (Class of 2015)



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