MIF PRE-COURSE DESCRIPTION

MF501 Mathematics for Finance I

This course provides the mathematical background for finance. Time value of money, Statistics for Investment Theory and Linear Algebra will be introduced. The course also includes matrix algebra, vector and vector spaces, eigenvalues, eigenvectors, and eigensystems.

MF502 Mathematics for Finance II

This course provides the mathematical background in calculus necessary to understand how mathematical techniques are used in finance. The course includes relevant topics in calculus, such as functions, limits, and continuity, the derivatives, analysis of functions, applications of derivatives, and integration and principles of integral evaluation, etc.

MF503 Basic Econometrics

This course emphasizes on statistical concepts needed for study and understanding econometrics. Statistical concepts include descriptive statistics, inferential statistics, and probability distribution theories. The course focuses on basic concept in regression analysis including the Ordinary Least Squares (OLS) estimation method, hypothesis testing of parameters, dummy variables regression model, and predicting of both simple and multiple regression models.

This course also focuses on the applications of econometrics software to estimate financial models. The students will learn about the sources of economic and finance data, how to prepare the data for the econometrics software, formulate the model and estimate the model using Ordinary Least Square method. The course enables the students to interpret the estimation results generated by econometrics software.

MF504 Basic Economics

This course provides the tools of basic economics analysis including the concepts of opportunity costs, choice, and supply and demand. It also covers macroeconomics which looks at large issues such as economic growth, inflation, unemployment, fiscal and monetary policies and issues affecting the entire economy.

MF505 Fundamental Accounting and Finance

This course explores foundations of accounting and finance. These include the function of accounting in identifying, recording and classifying financial transaction and preparation of financial statements. This course also includes basic finance such as financial ratio analyses and studying the functions of Finance