

COMP7802

Introduction to Financial Computing

Instructor :

C.D. Shum

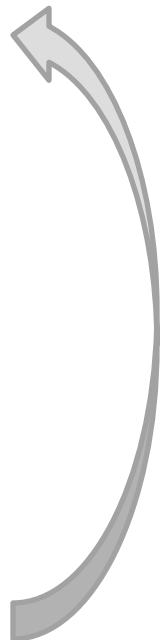
Financial Computing

Financial Arithmetic Basics + Instruments Pricing & Risk Management

- Basic financial arithmetic
- Concepts of time value of money
- Yield curve construction and pre-requisite understanding of financial instruments pricing mechanism (e.g. money markets instruments, FRA, interest rate futures and interest rate swaps, etc)
- Option pricing , Greeks and relevant risk management
- Modern risk management practice - VaR

Financial Modeling Applications

Financial Modeling using Excel spreadsheet

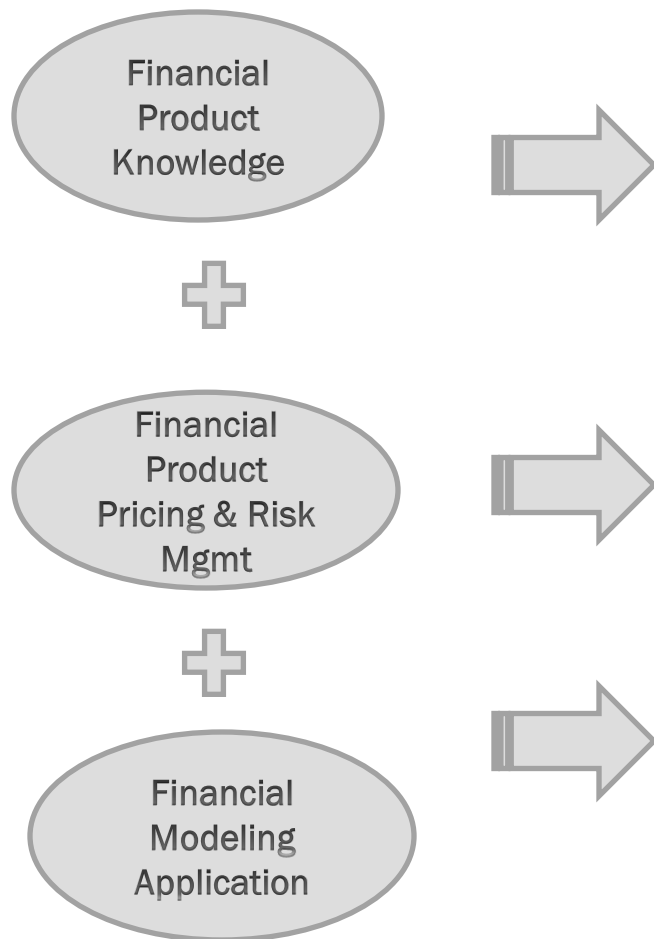


Course Objectives

- Provide solid grounding study in calculation of various financial instruments
 - Basic financial arithmetic and time value of money
- Introduction to financial instrument pricing and risk management theory and practice
 - Money Markets Instruments
 - FRA and Interest Rate Future
 - Interest Rate Swaps
 - Options
- The concepts and basic yield curve construction methodology in practice
- The key concepts of modern risk management practice - VaR
- Introduction of financial modeling using Excel where applicable in the course of teaching

Finance & Investment Related Profession

Basic Knowledge of Financial Product Pricing & Risk Mgmt



Potential Finance & Investment Related Profession



Course Material and Prerequisites

- Reference books:
 - Mastering Financial Calculations (A step-by-step guide to the mathematics of financial market instruments) by Robert Steiner
 - Options, Futures and Other Derivatives by John Hull
- Ask questions
- Assume no prior knowledge of financial products
- All financial concepts/products will be introduced from scratch
- Basic concepts of calculus and statistics are required

Assessment

- Instructor: C.D. Shum
- Teaching assistants: CHAN Chun Fai
- Assessment :
 - 2 assignments
 - 1 quiz
 - 1 final exam
- Assessment Schedule (tentative)
 - Assignment 1:
 - Tentative Due date: Oct
 - Assignment 2:
 - Tentative Due date: Nov
 - Quiz
 - Tentative date: end Oct