Advanced Finance
GEST-S402

Preparing for the prerequisites

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Course prerequisites

- This is an **ADVANCED finance** course → CORE PREREQUISITE CONCEPTS NEED TO BE MASTERED!

- At the beginning of the course, you should:
  1) Understand **statistics and econometrics** concepts and tools (including random variables, descriptive statistics, linear regression, see your introductory statistics and econometrics courses)
  2) Be highly proficient with **accounting and financial statements analysis** (see a.o. BDM 2013 chapter 1 "The Corporation" and chapter 2 "Introduction to Financial Statement Analysis")
  3) Be familiar with **basic financial theory and practice**, in particular:
     a) Free Cash Flows (FCF-related part of BDM 2013 chapter 8 "Fundamentals of Capital Budgeting")
     b) Time value of money (BDM 2013 chapter 4 "The Time Value of Money" and chapter 5 "Interest Rates")
     c) Bond valuation (valuation-related part of BDM 2013 chapter 6 "Valuing Bonds")
     d) Investment decision (BDM 2013 chapter 7 "Investment Decision Rules" and remainder of chapter 8 "Fundamentals of Capital Budgeting")

  → To help you, detailed references and learning objectives to be mastered before the course are set out in the next slides (for prerequisites (2) and (3) above)

- A written test on pre-requisites, counting for your final course grade, will take place in the first part of the course

- We will help you preparing through dedicated review sessions (pace will be RAPID!)

(1/5) Accounting and Financial Statements Analysis

- BDM, 2013 reference:
  - Chapter 1: *"The corporation"*
  - Chapter 2: *"Introduction to Financial Statement Analysis"*

1. Understanding what accounting and finance are about

2. Reading, understanding and interpreting the major financial statements
   a. Income statement
   b. Balance sheet
   c. Cash flow statement

3. Building on accounting basics to perform financial analysis (e.g., ratios)
   a. Performance
   b. Liquidity
   c. Solvency

(2/5) From Accounting to Finance: Cash Flows

- BDM, 2013 reference:
  - Chapter 8: *"Fundamentals of Capital Budgeting" (FCF related part)*

1. Understanding the fundamental difference between accounting and finance

2. Understanding the link various types of Cash Flows
   a. Cash Flows from Operating activities
   b. Cash Flows from Investing activities
   c. Cash Flows from Financing activities

3. Measuring Free Cash Flows

4. Understanding the importance of (Free) Cash Flows

(3/5) Time value of money, Present Value (PV) and Net Present Value (NPV)

- BDM, 2013 reference:
  - Chapter 4: *"The Time Value of Money"*
  - Chapter 5: *"Interest Rates"*

1. Understand the Present Value (PV) and the Net Present Value (NPV) calculation
   a. Market interest rate and discount factors
   b. General formula and useful formulas
   c. Interest rates and compounding intervals
   d. Real and nominal interest rate

2. Introduce the term structure of interest rates

(4/5) Bonds

- BDM, 2013 reference:
  - Chapter 6: *"Valuing Bonds"*

1. Introduce the main categories of bonds

2. Understand bond valuation

3. Analyze the link between interest rates and bond prices

4. Examine why interest rates might vary according to maturity

(5/5) Investment Project Analysis / Capital Budgeting Decisions

- BDM, 2013 reference:
  - Chapter 7: *"Investment Decision Rules"*
  - Chapter 8: *"Fundamentals of Capital Budgeting"*

1. Understanding commonly-used investment decision rules (definition and decision criteria / "hurdles")
   a. Net Present Value (NPV)
   b. Internal Rate of Return (IRR)
   c. (Modified) Payback Period (PP)
   d. Profitability Index (PI)
   e. Equivalent Annual Cash Flow (EA)
   f. (Accounting Rate of Return)

2. Understanding the context of investment decision making
   a. Get the ability to choose amongst different project proposals
   b. Be aware of the uses and pitfalls of commonly-used investment decision rules and criteria (interpretation, applications, limitations)
   c. Make project selection with financial resource constraints
   d. Understand what should be the minimum return on your project

Wishing you a good preparation/'refreshing' time!

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