

# Financial Management (Bachelor Programme)

## I. Introduction

From the Financial Management program, students have an opportunity to gain an in-depth understanding of accounting and finance. Upon graduation, students will be capable of critically evaluating financial statement information, comparing different investment policies and making financial decisions. Students will be capable of critical thinking and completing applied research independently.

## II. Course List

授课语言 Teaching Language	必修 或选修 Compulsory or Elective	课程编码 Course Code	课程名称 Course Name	学时 Total Hours	开设学期与学分 Semesters and Credits								
					I	II	III	IV	V	VI	VII	VIII	
中文 Chinese	必修 Compulsory	152010121	会计学原理 Principles of Accounting	34		2							
中文 Chinese	必修 Compulsory	152005131	中级财务会计 Intermediate Financial Accounting	51			3						
中文 Chinese	必修 Compulsory	152006131	成本管理会计 Cost and Management Accounting	34			2						
英语 English	必修 Compulsory	602011131	运营管理 Operations Management	34			2						
中文 Chinese	必修 Compulsory	152009141	计量经济学 Econometrics	34				2					
英语 English	必修 Compulsory	152020141	公司治 Corporate Governance	17				1					
中文 Chinese	必修 Compulsory	152016151	税法 Taxation Law	34					2				

中文 Chinese	必修 Compulsory	152006151	高级财务管理 Advanced Financial Management	34					2			
中文 Chinese	必修 Compulsory	152007261	国际财务管理※ International Financial Management	34						2		
中文 Chinese	必修 Compulsory	152018161	审计学 Auditing	34						2		
英语 English	必修 Compulsory	152019141	财务管理 Financial Management	51				3				
英语 English	必修 Compulsory	152015151	财务报表分析 Financial Statement Analysis	34					2			
英语 English	选修 Elective	152021231	资本市场 Capital Market	34			2					
中文 Chinese	选修 Elective	152004241	高级财务会计 Advanced Financial Accounting	51				3				
中文 Chinese	选修 Elective	152009251	Python 在财务中的应用 Python Programming in Corporate Finance	34					2			
中文 Chinese	选修 Elective	602012251	国际化企业竞争模拟（创新 实践课） Global Business Competition Simulation	17					1			
中文 Chinese	选修 Elective	152011261	商业伦理 Business Ethics	34						2		
中文 Chinese	选修 Elective	602013241	财会综合实验（创新实践 课） Comprehensive Experiments for Accounting and Financial Management	17				1				
中文 Chinese	选修 Elective	602014261	RPA 财务机器人 RPA and Financial Robots	34						2		

英语 English	选修 Elective	152020241	投资学 Investment	34						2		
中文 Chinese	选修 Elective	602016261	机器学习在财务中的应用 Machine Learning in Corporate Finance	34						2		
中文 Chinese	选修 Elective	152001221	数据库及其应用 Database Theory and Application	34						2		
中文 Chinese	选修 Elective	152019231	经济法 Economic Law	34						2		
中文 Chinese	选修 Elective	152025271	文献检索及论文写作 Literature Retrieving and Thesis Writing	17							1	
中文 Chinese	选修 Elective	152117251	智能财务共享 Intelligent Financial Shared Services	34					2			
中文 Chinese	选修 Elective	152119251	公司战略与风险管理 Company Strategy and Risk Management	34					2			
中文 Chinese	选修 Elective	602017261	财务智能分析与可视化 Visualization of Intelligent Financial Analysis	17						1		
中文 Chinese	选修 Elective	152121261	机器学习与财务数据分析 Machine Learning and Financial Data Analysis	34						2		
中文 Chinese	选修 Elective	152113271	私募股权投资理论与实务 Theory and Practice of Private Equity Investment	34							2	
中文 Chinese	选修 Elective	152116271	企业上市策略与实务 Enterprise Listing Strategy and Practice	34							2	
中文 Chinese	选修 Elective	602018251	量化投资策略 Quantitative Investment Strategy	34					2			
中文 Chinese	选修 Elective	152219251	投资银行学 Investment Banking	34					2			

中文 Chinese	选修 Elective	152224261	量化交易 Quantitative Trading	17						1	
中文 Chinese	选修 Elective	152223261	机器学习与金融数据挖掘 Machine Learning and Financial Data Mining	34						2	
中文 Chinese	选修 Elective	152221271	金融工程 Financial Engineering	34							2
中文 Chinese	选修 Elective	602019271	金融计量学 Financial Econometrics	34							2

### **III. Course Introduction**

#### **2.1.3 Principles of Accounting**

##### **2.1.3.1 Course Description**

Principles of Accounting as the compulsory course for financial management major, presents the basic theories, methods and techniques of accounting. While cultivating the interest of learners, this course enables students to gradually apply the knowledge and measurement of accounting given on the combination both in theory and practice. This course plays the fundamental role in learning the subsequent courses of accounting.

##### **2.1.3.2 Course Objectives**

Through the study of this course, students will be able to: understand the basic accounting theory, including content, meaning, basic viewpoints, etc.; master and use various accounting methods skillfully, including setting up accounts, double-entry bookkeeping, filling in and auditing accounting vouchers, registering accounting books, cost calculation,

property inspection, and preparing accounting statements.

### **2.1.3.3 Course Contents**

This course covers the key points of the principles of accounting course, embracing discussions in the following aspects: general introduction; accounting elements; accounting subjects, accounts and debit and credit bookkeeping methods; accounting of financing business; accounting of supply process business; accounting of production process business; accounting of sales process business; the formation and distribution accounting of financial achievements; accounting vouchers and accounting books; property inspection; accounting procedures; financial accounting report.

### **2.1.3.4 Course Methods**

This course adopts the methods of classroom teaching, practice teaching, group discussion, after-class homework and so on.

### **2.1.3.5 Teaching Language**

Chinese.

### **2.1.3.6 Reference Books**

1. Fundamentals of Accounting (2nd Edition), by Yin Meiqun et al., Economic Management Press, 2022.
2. Basic Accounting (7th Edition), by Chen Guohui and Chi Xusheng, Dongbei University of Finance and Economics Press, 2021.
3. Principles of Accounting (23rd Edition), by John J. Wild et al., Renmin

University of China Press, 2021.

4. New edition for Accounting Principles-Basic Accounting, by Li Haibo and Jiang Ying, Lixin Accounting Publishing House, 2020.

#### **2.1.4 Intermediate financial accounting**

##### **2.1.4.1 Course Description**

Intermediate financial accounting course is the main professional course of financial management, and also the core of the whole accounting knowledge system. Based on the principles of accounting and the latest accounting standards, this course introduces the basic theories, knowledge and methods of accounting recognition, measurement and recording of major businesses involved in the daily operation of enterprises. The contents mainly include general introduction, monetary capital, inventory, financial assets, long-term equity investments, fixed assets, intangible assets, liabilities, owner's equity, expenses, income and profit, etc.

##### **2.1.4.2 Course Objectives**

After studying this course, students supposed to understand the basic theories and methods of financial accounting, the accounting treatments of the companies' economic transactions and the preparation of the accounting statements and the disclosure of accounting information. This course cultivates students' ability of professional judgment and solving

practical problems, so that students can have an overall understanding of accounting standards of enterprises, so that they can better adapt to the needs of daily accounting work of enterprises, and at the same time lay a solid foundation for the study of subsequent courses.

#### **2.1.4.3 Course Contents**

This course mainly includes the following contents: financial accounting and its characteristics; General business accounting of cash, bank deposits and other monetary funds; General business accounting of inventory; Classification of financial assets and its general business accounting; Measurement, conversion and disposal of long-term equity investments; Recognition, measurement and accounting of fixed assets; Recognition, measurement and accounting treatment of intangible assets; Classification of liabilities and general operating accounting treatment; Classification of owners' equity and its general business accounting; Expense, revenue and profit recognition, measurement and accounting, etc.

#### **2.1.4.4 Course Methods**

The course is conducted through a combination of online and offline teaching methods. The online courses are conducted using MOOCs that are already online. Offline classroom teaching is mainly taught by teachers and adopts various forms of practical teaching.

#### **2.1.4.5 Teaching Language**

Chinese.

#### **2.1.4.6 Reference Books**

1. Liu Yongze, Chen Lijun, 2018, Intermediate Financial Accounting, Dalian: Dongbei University of Finance and Economics Press.
2. China Institute of Certified Public Accountants, 2020, Accounting, Beijing: China Finance and Economics Press.
3. Juncai Wang, 2019, Intermediate Financial Accounting, Beijing: Economic Science Press.
4. Wang Changrui, 2018, Intermediate Financial Accounting, Beijing: China Finance and Economics Press.
5. Ministry of Finance of the People's Republic of China, 2020, Accounting Standards for Business Enterprises, Shanghai: Shu Lun Pan Accounting Publishing House.
6. Ministry of Finance of the People's Republic of China, 2020, Application Guide of Accounting Standards for Enterprises, Shanghai: Lixin Accounting Press.

#### **2.1.5 Cost and management accounting**

##### **2.1.5.1 Course Description**

Cost and management accounting is a branch of accounting separated from traditional accounting and juxtaposed with financial accounting, focusing on improving business management and economic efficiency for enterprises. It includes two major components, cost accounting and



management control system. Management accounting is the most effective tool for the integration of strategy, business and finance of an enterprise. Management accounting plays an increasingly important role in the financial management activities of enterprises. This course is designed to enable students to comprehensively understand and master the basic theory, basic methods and main business skills of management accounting, and initially master and apply the relevant techniques for dealing with management accounting practices, using a series of specialized ways and methods to collect and summarize, analyze and report various economic information, through which to make forecasts and decisions, develop plans, control operating operations, and evaluate performance, in order to Improve students' theoretical and application skills, and lay a good foundation for subsequent courses.

#### **2.1.5.2 Course Objectives**

- 1.Through the study of the basics of cost accounting and management accounting, students aim to master the characteristics and basic theories of cost and management accounting.
- 2.To master costing procedures, methods and accounting treatment and be able to apply them flexibly, and to understand the relevant content and methods of cost management.
- 3.Students will develop the ability to engage in business management forecasting, decision making and analytical control.

### **2.1.5.3 Course Contents**

Introduction to management accounting; concepts and classification of costs; principal-volume-profit analysis; operating decisions; inventory decisions; decision making and management for specific purposes; investment decisions; principles of costing; methods of product costing; job costing method; standard cost method; comprehensive budget; performance assessment and evaluation; overview of the relationship between management accounting and other branches of accounting and their development; analysis of cost patterns; characteristics, advantages and specific implementation; analysis of the interrelationship between cost, quantity and profit; analysis of forecasting of revenue, cost and profit elements; issues related to short-term business decisions; analysis and selection of long-term business decisions; organization and implementation of comprehensive enterprise budgets; cost control of enterprises; determination of inventory quantities and methods of inventory control; meaning, characteristics and specific implementation of responsibility accounting; concept, characteristics and implementation steps; the current development of strategic management accounting and its application in enterprises.

### **2.1.5.4 Course Methods**

Classroom theory lectures are the main focus, supplemented by case studies and student discussions.

### **2.1.5.5 Teaching Language**

Chinese.

### **2.1.5.6 Reference Books**

Cost and Management Accounting. Sun Maozhu, Yu Fusheng. Renmin University of China Press,2013.

Cost Accounting: A Managerial Emphasis(15th Edition). Charles T. Horngren et al. Renmin University of China Press, 2016.

Cost and Management Accounting(1th Edition). Yin Meiqun. Higher Education Press,2020.

## **2.1.6 Operations Management**

### **2.1.6.1 Course Description**

Operations management goes by many names: Production, Production Management, or simply Operations. The course define it as the production and delivery of goods and services. It encompasses designing the product and its accompanying production process, acquiring and organizing the necessary resources, and planning and executing production. This course is a required course for business school students and is suitable for undergraduate students majoring in business administration (including finance, financial management, international finance, and marketing), graduate students not majoring in business administration, and international students coming to China.

### **2.1.6.2 Course Objectives**

1. Master the theoretical framework of modern operations management, be familiar with the core concepts in manufacturing, management and operation processes, and be able to accurately understand the connotations and extensions of the core concepts.
2. To increase understanding of the problems and opportunities faced by the operations manager in manufacturing and service operations.
3. To develop an ability to apply operations management concepts in a variety of settings.
4. To develop an understanding of operations management techniques in order to be able to evaluate recommendations made by technical specialist in the field.

### **2.1.6.3 Course Contents**

Production and process design.

Planning and scheduling.

Inventory control.

Quality assurance and improvement.

Supply chain management.

Project management.

Statistical analysis and decision-making.

### **2.1.6.4 Course Methods**

A variety of teaching methods may be used depending on contents. These

include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, learning experiences outside the classroom, and performance.

#### **2.1.6.5 Teaching Language**

**English**

#### **2.1.6.6 Reference Books**

Principles of Operations Management: Sustainability and Supply Chain Management, Global Edition, 12th edition , **Published by Pearson (October 17th 2023)**

Essentials of Operations Management, 3rd edition , Published by Pearson (March 1st 2023)

#### **2.1.7 Econometrics**

##### **2.1.7.1 Course Description**

Econometrics is a branch of economics that takes mathematical economics and mathematical statistics as its methodological basis, and uses the establishment of econometric models as the main means to quantitatively analyze and study the relationships of economic variables with stochastic properties. The main content includes theoretical econometrics and applied econometrics. Theoretical econometrics is the study of how to use, adapt and develop the methods of mathematical

statistics to make it a special method for the determination of stochastic economic relations. Applied econometrics is guided by certain economic theories and based on statistical data reflecting facts, econometric methods are used to study the practicalization of economic mathematical models or to explore empirical economic laws.

#### **2.1.7.2 Course Objectives**

1. Students will have a solid background in econometric theory, which will lay the foundation for other courses in economics and further in-depth research.
2. Develop students' ability to identify problems and solve them.
3. Improve students' econometric analysis skills and proficiency.

#### **2.1.7.3 Course Contents**

The course provides a systematic explanation of the assumptions, estimation, tests, and applications of multiple linear regression models, as well as a systematic discussion of multiple covariance, autocorrelation, and heteroskedasticity. In addition, issues related to dummy variable regression models and time series models are taught in detail respectively.

The lectures are accompanied by experimental teaching sessions to learn to apply relevant statistical software for data analysis.

#### **2.1.7.4 Course Methods**

Classroom theory lectures are the main focus, supplemented by case studies and student discussions.

### **2.1.7.5 Teaching Language**

Chinese.

### **2.1.7.6 Reference Books**

- 1.Econometrics. Li Zinai. Higher Education Press,2000.
- 2.Introduction to Econometrics: A Modern Perspective (6th Edition). Jeffrey M. Wooldridge. Renmin University of China Press, 2018.

## **2.1.8 Corporate governance**

### **2.1.8.1 Course Description**

This course will teach the fundamental theories and practice of corporate governance. This course covers an Introduction to Corporate Governance, the boards of directors, the management, the division of profit sharing and various forms of employee ownership and equity ownership among insiders, shareholder activism, the impact of takeovers and mergers and acquisitions on governance, ethical issues such as conflicts of interest and insider trading, international corporate governance, etc. The course presumes that students have taken basic courses in accounting, economics, finance and econometrics before taking this course. The goal is to introduce briefly the concepts and rules underlying domestic and foreign corporations' structures for governance, and then to examine the unique situations and problems faced by international corporations managing on a global level.

### **2.1.8.2 Course Objectives**

1 Learn the scope of Corporate Governance and develop a foundational understanding of what issues must be considered when discussing the Organization and Management of a Corporation.

B. 2. Study the unique issues faced by International Corporations as well as some of the recognized theories and solutions to those problems such corporations face.

3. Discuss the differences in international theories of corporate governance and the various approaches countries have taken around the world.

4. Discover the role of the People involved in Corporate Governance and the significance of each.

5. Examine the importance of Corporate Governance in the day-to-day and overall management of a company and the role it plays in social safety.

### **2.1.8.3 Course Contents**

The course is given in 9 units, embracing discussions in the following aspects:

Introduction to Corporate Governance, Board of Directors: Duties and Liability, Board of Directors: Selection, Compensation, and Removal, Board of Directors: Structure and Consequences, CEO Selection, Turnover, and Succession Planning, Executive Compensation and



Incentives, The Market for Corporate Control, Shareholders and Shareholder Activism, Stakeholders and Stakeholder Activism.

#### **2.1.8.4 Course Methods**

Lectures and discussion.

#### **2.1.8.5 Teaching Language**

Chinese.

#### **2.1.8.6 Reference Books**

1. Corporate Governance Matters by David Larcker, Brian Tayan, FT Press, Third Edition, November 5, 2020

2. Corporate Governance by Monks, Robert A.G. and Nell Minow, New York: John Wiley & Sons, 2011, 5th edition. ISBN 978-0-470-97259-5.

3. Corporate Governance by Kenneth Kim, John R. Nofsinger, Derek J Mohr, 2010 3/E, Prentice Hall

### **2.1.9 Tax Law**

#### **2.1.9.1 Course Description**

This course is a compulsory course for economics and management majors, and is one of the subjects in the unified national examination for Certified Public Accountants. In the course the students will be given an introduction to some key aspects of the tax theory and tax administration system in China. Its theoretical basis, assessment methods, tax incentives, tax collection and management need to be systematically studied and

researched. “Taxation Laws” is dedicated to the effect and mechanism of tax law (mainly tax substantive law) and the latest tax administration measures on tax compliance behavior of micro taxpayers.

### **2.1.9.2 Course Objectives**

With increased knowledge of the tax law and interaction with the instructor and classmates, students will be able to:

1. To understand the role of our current tax law in regulating economic;
2. To have a clear understanding of the application of tax law in the actual enterprise;
3. To learn how to use the knowledge of tax law to deal with tax administration problem;
4. To establish the correct concepts of tax law and tax thought;
5. To lay a good foundation for the following professional courses;
6. To cultivate the ability in the actual work of the enterprise service.

### **2.1.9.3 Course Contents**

The course is given in 12 units, embracing discussions in the following aspects:

The brief introduction of the basic tax concept and theory, such as tax essence, tax principle, tax function, and the elements of tax law. In addition, the taxation methods and specific regulations of each major tax, such as VAT, consumption tax, corporate income tax, individual income tax, environmental protection tax and other relevant regulations.

#### **2.1.9.4 Course Methods**

Lecture and discussions, demonstrations, hands-on experiences.

#### **2.1.9.5 Teaching Language**

Chinese.

#### **2.1.9.6 Reference Books**

- 1.Chinese Institute of Certified Public Accountants(2022), Taxation Laws, China Financial Economic Publishing House.
- 2.Ji Jinbiao(2022), Tax Planning, The Press of Chinese People University.
- 3.Zhu qing(2018), International Taxation, The Press of Chinese People University.
- 4.Tang gongliang(2012), Tax Theory and Policy, Economic Science Press.

#### **2.1.10 Advanced financial management**

##### **2.1.10.1 Course Description**

Advanced financial management is a course aiming at imparting special knowledge of financial management, training advanced financial management thinking and training advanced financial management talents. This course introduces the financial management of enterprise merger and acquisition, the financial management of business group, the financial management of enterprise bankruptcy liquidation, etc. It is a course designed to further improve students' financial theory level and

management ability.

### **2.1.10.2 Course Objectives**

Through the study of this course, students will be able to: grasp the theoretical structure of financial management, learn the assumptions and objectives of financial management; master the financial management of enterprise merger and acquisition and that of enterprise group, learn the financial management of enterprise bankruptcy liquidation and other topics; understand the actual problems in the financial management of enterprises.

### **2.1.10.3 Course Contents**

This course covers the key points of the advanced financial management course, embracing discussions in the following aspects: the theoretical structure of financial management, the assumption and goal of financial management, the motivation and effect of enterprise M&A, the method of evaluating the value of the target company, the financing of enterprise M&A, leveraged M&A, management M&A, the strategy of M&A defense, merger and integration, characteristics of financial management of enterprise group, organizational structure of enterprise group, financial management system of enterprise group, financing management of enterprise group, investment management of enterprise group, distribution management of enterprise group, enterprise group budget control, enterprise group performance evaluation, enterprise bankruptcy

early warning management, financial management of reorganization and reconciliation, financial management of bankruptcy liquidation, etc. .

#### **2.1.10.4 Course Methods**

This course adopts the methods of classroom teaching, practice teaching, group discussion, after-class homework and so on.

#### **2.1.10.5 Teaching Language**

Chinese.

#### **2.1.10.6 Reference Books**

Advanced Financial Management (5th Edition), by Wang Huacheng et al., Renmin University of China Press, 2022.

Advanced Financial Management (3rd Edition), by Lu Zhengfei et al., Peking University Publishing House, 2018.

Advanced Financial Management (3rd Edition), by Liu Shulian et al., Dongbei University of Finance and Economics Press, 2020.

Advanced Financial Management (2nd Edition), by Tang Guliang et al., Tsinghua University Publishing House, 2017.

### **2.1.11 International Financial Management**

#### **2.1.11.1 Course Description**

International financial management is an elective course to study the financial management problems faced by enterprises engaged in international production and operation, and is an extension of modern

financial management theory in the international field. This course is designed to equip students with the basic principles and practical skills of international financial management and to develop their ability to analyze and solve practical problems in international financial activities.

### **2.1.11.2 Course Objectives**

Through the study of this course, students will be able to: understand the general situation of the theoretical system of international financial management discipline; master the knowledge of foreign exchange market, exchange rate forecast, foreign exchange trading, foreign exchange risk management, international financing, international investment, international working capital management, international transfer price, international tax management etc.; master the skills of avoiding financial risks in transnational operations, and have the vision and ability of international financial management.

### **2.1.11.3 Course Contents**

This course covers the key points of the international financial management course, embracing discussions in the following aspects: introduction to international financial management, international financial management environment, foreign exchange market and exchange rate forecast, foreign exchange risk management, international financing, international direct investment, international working capital management, international transfer price, international tax management and other topics.

It aims to make students understand the concepts of foreign exchange and exchange rate, be familiar with foreign exchange trading methods, master foreign exchange risk management methods, and learn the theories and methods of international financing, international investment, international working capital management and international tax management.

#### **2.1.11.4 Course Methods**

This course adopts the methods of classroom teaching, practice teaching, group discussion, after-class homework and so on.

#### **2.1.11.5 Teaching Language**

Chinese.

#### **2.1.11.6 Reference Books**

International Financial Management (5th Edition), by Xu Yanfang et al., Renmin University of China Press, 2022.

International Financial Management (5th Edition), by Xia Leshu et al., Dongbei University of Finance and Economics Press, 2020.

International Financial Management (13th edition), by Jeff Madura, Peking University Publishing House, 2020.

International Financial Management (8th Edition), by Cheol S Eun et al., translated by Zhang Hua, etc., Machinery Industry Press, 2018.

International Financial Management, by Chen Yongying et al., China Financial Publishing House, 2014.

## **2.1.12 Auditing**

### **2.1.12.1 Course Description**

Auditing is a social science that studies the law of audit generation and development. It involves a series of important concepts and theoretical problems, such as the nature of audit, audit object, audit hypothesis, audit function, audit objective, audit relationship, audit risk, audit procedure and audit method, as well as related practical problems. Auditing is a Compulsory course for undergraduate students majoring in accounting. It has the characteristics of comprehensiveness and application, and occupies an important position in the accounting curriculum system. In our country, the audit is generally divided into CPA audit, government audit and internal audit. This course teaches CPA audit.

### **2.1.12.2 Course Objectives**

The purpose of this course is to guide the basic principles of auditing, according to the principle of combining theory with practice, through the analysis of the practical application of auditing (cases):

1.so that students can deeply understand and master the theoretical knowledge system of auditing.;

2.at the same time, students are guided to actively carry out extracurricular observation, software operation and internship, to cultivate and improve audit skills, so that students can quickly and skillfully qualified for audit work after graduation.



### **2.1.12.3 Course Contents**

Overview of auditing explains the history, definition, classification and techniques of auditing; Auditing professional standards and auditing personnel's legal liability explain the professional standards system and legal liability of CPA; Explain related concepts and applications of audit objectives, audit evidence and audit working papers; Audit risk and audit importance explain related concepts and their application in practice; Audit risk assessment explains the audit risk assessment procedures, understands the auditee and its environment, and evaluates the risk of material misstatement; Explain the measures, control tests and substantive procedures for the risk of material misstatement; Audit technical sampling explains the concept of audit sampling and its application in control testing and substantive testing procedures; Sales and collection cycle, monetary fund audit explains how to apply the basic principles of audit to specific audit business; Audit reports explain audit opinions and issue audit reports; Internal Control Audit This section describes internal control audit concepts, procedures, and internal control audit reports.

### **2.1.12.4 Course Methods**

Under normal circumstances, offline teaching method is adopted, and in special periods, online teaching method is adopted, or a combination of online and offline teaching method is adopted. The teaching is based on

concept explanation, theoretical analysis and after-class practice, supplemented by case teaching. At the same time, students are encouraged to actively participate in practice and audit practice, so as to realize the organic integration of theory and practice.

#### **2.1.12.5 Teaching Language**

Chinese.

#### **2.1.12.6 Reference Books**

1. Audit, Chen Hanwen, China Renmin University Press, 2020.
2. Auditing (3rd Edition), Ye Chengang, Li Hong, Zhang Yan, China Machine Press, 2017.
3. Audit, China Institute of Certified Public Accountants, China Finance and Economics Press, 2022.
4. Auditing Practice Teaching Case, Peng Junying, Chen Yanfen, In return, China Renmin University Press, 2018.

### **2.1.13 Financial Management**

#### **2.1.13.1 Course Description**

Financial Management is a compulsory professional course for Financial Management major and other related Economics and Management majors. It is a very important basic course in the whole learning process of the major. The course mainly builds on the trade-off between risk and return, takes the financial decision framework as the main line, establishes a

structural system which includes time value of money, risk and return, investment decision, financing choice, dividend policy, etc., focuses on the basic principles of financial management and how the financial managers make decisions based on these fundamental theories.

### **2.1.13.2 Course Objectives**

With comprehensive understanding of the basic principles of financial management and apply the relative methods to do investment, financing and payout, etc. The students will be able to:

To gain the basic principles of financial management, e.g. time value of money, security valuation, capital asset pricing model (CAPM), etc.

To understand the capital budgeting methods, principles of cash flow estimation, investment risk measurement.

To know the financing approaches, calculation of cost of capital, capital structure analysis.

To identify the payout policy, and the methods for making dividend policy.

To explain the model for cash management, inventory management and accounts receivables management, etc.

### **2.1.13.3 Course Contents**

The course will introduce the concepts, objectives, principles and methods of financial management; The time value of money; Risk and reward; Valuation of bonds and stocks; Analysis of enterprise investment

environment, prediction of investment amount, estimation of investment cash flow, investment decision indicators and their application, and risk investment decision analysis; The motivation and principle of enterprise financing, the enterprise financing environment, the prediction of the amount of financing, the equity financing method, the debt financing method, and the mixed financing method; Relevant theories of capital structure, capital structure decision; Cost of Capital; Leverage benefits and risks; Relevant theories of dividend policy and formulation of dividend policy; Cash management, accounts receivable management, inventory management, etc.

#### **2.1.13.4 Course Methods**

The course is given in a mixed online and offline teaching mode. The online course is conducted by using MOOC; Offline teaching is mainly based on lectures and discussion, which guides students to apply financial management theory to practical cases and analysis.

#### **2.1.13.5 Teaching Language**

Chinese.

#### **2.1.13.6 Reference Books**

Eugene F. Brigham, Joel F. Houston. Fundamentals of financial management (15th Edition), Cengage Learning, 2018.

Stephen A. Ross et al. Corporate Finance (11th Edition), McGraw-Hill Education, 2017.

Robert C. Higgins et al. Analysis for Financial Management (9th Edition), Peking University Press, 2015.

Jonathan Berk. Fundamentals of Corporate Finance (Second Edition), China Renmin University Press, 2017.

## **2.1.14 Financial statement analysis**

### **2.1.14.1 Course Description**

Financial statement is the basic discipline for the major of financial management. The purpose of this course is to provide student with a framework for analyzing a firm's past performance, estimating its future performance, and valuing its equity. The course integrates key concepts from accounting, finance, economics, and business strategy and applies them to financial decision-making.

### **2.1.14.2 Course Objectives**

The course focuses on teaching student to interpret numbers in the financial statements. Student should leave the course with the ability to generate reasonably accurate forecasts of a firm's future financial performance, including revenues, earnings, asset balances and free cash flows.

### **2.1.14.3 Course Contents**

The course is given in 10 units, embracing discussions in the following aspects : the introduction to investing, valuation and the financial

statements; analysis of financial statements and business activities; financial analysis including analysis of profitability and analysis of growth; analysis of the quality of financial statement; valuation analysis and the analysis of risk and return.

#### **2.1.14.4 Course Methods**

Lectures and discussion; case study.

#### **2.1.14.5 Teaching Language**

English.

#### **2.1.14.6 Reference Books**

1. “Financial statement analysis and security valuation” (McGraw-Hill)  
Penman S H.
2. “Understanding Company Financial Statements” (Penguin), R. H. Parker
3. “Business Analysis and Valuation: IFRS edition” (Thomson Learning), K.G. Palepu, V. L. Bernard, P. M. Healy and E. Peek
4. “Financial statement analysis” Xinming Zhang and aimin Qian, China Renmin University Press
5. “Financial statement analysis” Martin Fridson, China Renmin University Press

### **2.1.15 Capital Market**

#### **2.1.15.1 Course Description**

This course provides students with a fundamental understanding of the basic roles and functionality of financial markets, such as equity, fixed-income, futures, foreign currencies and real estate, and key financial institutions, such as commercial banks, non-bank financial institutions and central banks.

Students aspiring to a career in Accounting, Finance, and Business Management will find this course useful. A thorough exploration of the issues in market trading mechanism and foreign exchange policies will also be helpful in other areas of future careers such as investments and international commerce.

This course will cover three main problems all serious business leaders and practitioners, to varying degrees, have to face,

1. Definitions of financial markets and institutions – What are they?
2. Roles of financial markets and institutions –how do they work and function, individually and altogether?
3. Uniqueness of China - How may the above differ between China and other countries?

#### **2.1.15.2 Course Objectives**

Upon successful completion of this course, students should be able to,

Discuss a financial system in a modern economy,

Understand the role and purpose of a central bank and its operations.

Discuss the trading mechanism in most capital markets,

Compare equity markets across the border,

Understand the functionality of bond markets, FX markets, derivatives markets and real estate markets.

Evaluate the investment portfolios of mainstream financial institutions based on their respective business models.

### **2.1.15.3 Course Contents**

Course Introduction

Financial Systems

Central Banks and Monetary Policy

The Banking System

Stock Markets

Bond Markets

FX Markets

Derivatives Markets and Real Estate Markets

Mutual Funds

Insurance Companies

Pension Funds

Investment Banks (Securities Firms)

### **2.1.15.4 Course Methods**

Lectures and discussions, case studies

### **2.1.15.5 Teaching Language**

Chinese



### **2.1.15.6 Reference Books**

1.Frederic Mishkin and Stanley Eakins, Financial Markets and Financial Institutions, 9th Edition, 机械工业出版社, 2020.12 ISBN : 9787111667131

2.Jeff Madura, Financial Markets and Financial Institutions, 12th Edition, 中国人民大学出版社, 2020.8 ISBN: 9787300278360

### **2.1.16 Advanced Financial Accounting**

#### **2.1.16.1 Course Description**

Advanced financial accounting is the core course of financial management major, and it is also the extension of theory and method based on intermediate financial accounting. With the development of social economy, this course supplements and develops the original content of financial accounting, that is, it uses the inherent method of financial accounting to confirm, measure and deal with the complex business and special business in the economic activities of enterprises with the change of objective economic environment. The main contents include business combination, consolidated financial statements, income tax accounting, accounting policy accounting estimates and their changes and error correction, events after the balance sheet date, exchange of non-monetary assets, share based payment, foreign currency translation, lease accounting and derivative financial instruments.

### **2.1.16.2 Course Objectives**

Through this course, students can master the accounting treatment methods and related theoretical knowledge of special economic business and complex economic business. It also enables students to understand new and frontier issues in accounting, and to have the ability and quality to analyze and deal with various complex economic business of enterprises under the actual economic environment and asset market conditions.

### **2.1.16.3 Course Contents**

The content of this course includes the characteristics of advanced financial accounting and its place in the financial management curriculum system; legal provisions, basic background and practical accounting treatment of accounting for business combination; parent-subsidiary theory and the different theories and methods of consolidated accounting statements, as well as the specific accounting treatment methods under accounting standards of China; theories and methods of tax adjustments resulting from differences in accounting standards and tax laws; standard provisions and treatment of accounting policy changes, accounting error correction and accounting estimates changes; the content and practical accounting treatment of events after the balance sheet date; lease accounting theory and practice; special topic in accounting for the exchange of non-monetary assets; special topic on share-based payments;

special topic on foreign currency translation and derivative financial instruments and so on.

#### **2.1.16.4 Course Methods**

This course is mainly taught by teachers, while practical teaching activities are carried out in a variety of formats. Meanwhile, real cases will be distributed in the form of assignments to enhance students' ability to deal with the special and complex business of enterprises.

#### **2.1.16.5 Teaching Language**

Chinese.

#### **2.1.16.6 Reference Books**

1. Advanced Financial Accounting (6th Edition), Rong Fu, China Renmin University Press, 2021.
2. Accounting, the Chinese Institute of Certified Public Accountants, China Financial and Economic Publishing House, 2023
3. Accounting Standards for Business Enterprises, Ministry of Finance of the People's Republic of China, Lixin Accounting Press, 2023.
4. Guidance on the Application of Accounting Standards for Business Enterprises, Ministry of Finance of the People's Republic of China, Lixin Accounting Press, 2023.

### **2.1.17 Python Programming in Corporate Finance**

#### **2.1.17.1 Course Description**

Python is a powerful and widely used programming tool. This course combines the basic knowledge of Python with financial analysis, briefly introduces the basic knowledge of computer programming, and focuses on training students to use Python in various financial cases for analysis. The course is both concise and practical, helping students with zero programming foundation to quickly learn Python language and acquire the ability to realize financial analysis automation.

#### **2.1.17.2 Course Objectives**

Through the combination of theory and practice, students can understand the basic knowledge of computer programming, master the method of building a Python development environment, and be able to write simple programs independently. To make students familiar with the statistical analysis and visualization of financial data, including the definition and operation of multi-dimensional array objects in Numpy library, the analysis method of DataFrame in Pandas library, and the graphic drawing in Matplotlib library. Through a series of financial analysis cases, to help students master the use of Python to achieve financial static analysis, trend analysis and peer comparison.

#### **2.1.17.3 Course Contents**

The teaching content of this course is divided into ten units, including the construction of the Python development environment, the basic programming language of Python, the scientific calculation of Numpy

library, the data analysis of Pandas library, the visualization of Matplotlib library, the financial static analysis, the financial trend analysis, the financial peer analysis, the cash flow statement analysis and DuPont analysis.

#### **2.1.17.4 Course Methods**

Classroom lectures, hands-on experiments, and exercises after class.

#### **2.1.17.5 Teaching Language**

Chinese.

#### **2.1.17.6 Reference Books**

1. Python Data Science Handbook, by Jake VanderPlas, O'Reilly Media, 2016.
2. Big Data Financial Analysis: Based on Python, by Zhang Min and Wang Yutao, China Renmin University Press, 2022.
3. Python Business Data Analysis, by Zhang Jin and Weng Zhangwen, China Renmin University Press, 2021.

### **2.1.18 Global Business Competition Simulation**

#### **2.1.18.1 Course Description**

Global Business Competition Simulation is an elective professional course for Financial Management major, as well as a highly comprehensive simulation course, including production module, R&D module, marketing module, logistics module, finance module and so on.

This course allows the students to run a virtual multinational high-tech enterprise with strategies related to strategy, production, research and development, marketing, and finance based on market prospects. It can improve the students' understanding and capabilities of running global business operations of a firm in a dynamic, competitive environment.

### **2.1.18.2 Course Objectives**

This course requires students to capture and seize market opportunities in complex real business environments through a simulated course unified platform, to view problems from a global perspective, and to have a mindset that compares long-term corporate strategies and short-term actions; while integrating theoretical knowledge, it cultivates analytical judgment skills, entrepreneurial spirit, teamwork and communication and coordination skills; it cultivates students' self-discipline awareness of consciously abiding by business ethics standards.

### **2.1.18.3 Course Contents**

The students participating in the course are divided into several groups, each group is a company, and each company can sell mobile communication products in three different markets: the United States, Asia and Europe. The simulation course consists of several rounds, and students will make decisions on strategic planning, investment location selection, production research and development, logistics sales, international financial operations and other aspects based on the different

market prospects given in each round. At the end of each round, the system settles and generates the operating results and financial statements of the student enterprise. Each company makes decisions for the next round based on its operating situation, and so on.

#### **2.1.18.4 Course Methods**

The biggest difference between this course and traditional teaching and case analysis is that the simulation project is dynamic. Students need to make strategic decisions and implementation in a dynamic environment of continuous operation. It integrates experiential, integrative and practical aspects into one. The course is mainly based on student practice, supplemented by teacher theoretical teaching, using a blended teaching method of online and offline.

#### **2.1.18.5 Teaching Language**

Chinese.

#### **2.1.18.6 Reference Books**

- 1.Wang Qiwen et al.: Decision Simulation, Peking University Press, 2012.
- 2.Zhou Baixiang: Enterprise Management Decision Simulation, Chemical Industry Press, 2018.
- 3.Meng Tian: Challenges of Globalization: Business Decision Making and Simulation , Shanghai Jiaotong University Press , 2013 . ——Cesim Mobile Simulation

4. Little Arthur A. Thompson et al., Lan Hailin , Huang Manli , Li Weining et al., Translated by “Strategic Management: Concepts and Cases” (21st Edition of Original Book), Machinery Industry Press , 2019 .
5. Graham Hooley et al., Lou Zun translated “Marketing Strategy and Competitive Positioning” (6th edition), Renmin University of China Press , 2019 .
6. Li Jingming et al., ed., “Financial Strategic Management” (2nd edition), Economic Management Press , 2017 .
7. Robert Kaplan , David Norton , translated by Shanghai Boyi Consulting Co., Ltd., “Balanced Scorecard Strategic Practice”, Renmin University of China Press , 2008 .

### **2.1.19 Business Ethics**

#### **2.1.19.1 Course Description**

Business Ethics is an elective course for financial management majors. It is also an interdisciplinary subject with strong practicality and thinking. It contains theories and methods of philosophy, management, economics, ethics, jurisprudence, psychology, environmental sciences, and sociology and other subjects. The course is based on the combination of management practice and theory, with case teaching and group debate as the main teaching methods, aiming to help students face moral dilemmas in the future, they can have a higher ethical professional quality and



choose the decision to undertake the best social responsibility.

### **2.1.19.2 Course Objectives**

The purpose of this course is to enable students to have a clear and comprehensive understanding of business ethics analysis tools and methods; systematically master ethical analysis tools such as utilitarianism, deontology, justice, care ethics, virtue ethics and so on; analyze ethical issues in employee management through rational organizational structure and political organizational structure; use Locke theory, Adam Smith theory, Ricardian theory, Marxism to analyze ethical issues in the free market; analyze the ethical problems in monopoly with perfect competition theory; solve the ethical problems in marketing by contract theory and social cost theory ; analyze the ethical issues of enterprises' environmental impact with the environmental cost externalization theory; use the characteristics of accounting profession to settle ethical issues in accounting practice. Through the above, it can let enterprises abide by accounting professional ethics, make optimal moral decisions when facing ethical dilemmas, and better assume social responsibilities. In this process, the course teaching will achieve the ideal state of critical thinking that echoes the development of reality.

### **2.1.19.3 Course Contents**

This course includes ethical analysis tools and theories, employee management ethics, free market ethics, complete competition ethics,

marketing ethics, corporate environmental impact ethics, accounting professional ethics and so on. The main difference between this course and the traditional course is that many cases of this course will put enterprises in a moral dilemma. Students need to work in small groups, integrate themselves with enterprises, think and debate from a practical perspective, combine theory and practice with high operability.

#### **2.1.19.4 Course Methods**

This course emphasizes real case analysis. The teaching method is mainly based on guidance and teaching, supplemented by case analysis. In this process, teachers play the role of inspirers, listeners, and discussants, instead of moral indoctrinators and Moral arbiter.

#### **2.1.19.5 Teaching Language**

Chinese.

#### **2.1.19.6 Reference Books**

1. Business Ethics Concepts and Cases (8th Edition), Manuel G. Velasquez, China Renmin University Press, 2019.
2. Business and Professional Ethics for Accountants, Directors and Executives, Hanwen Chen and Hongling Han, China Renmin University Press, 2020.

#### **2.1.20 Comprehensive Experiments for Accounting and Financial Management**

### **2.1.20.1 Course Description**

Comprehensive Experiments for Accounting and Financial Management is a course that guides students to practice on the basis of reviewing the basic knowledge and theory of financial management course. There is a gap between book knowledge and practice. This course uses the VCASE financial management platform to carry on the practice teaching, causes the student to contact the enterprise' real financial data and uses the learned financial management knowledge to solve the enterprise's actual problems.

### **2.1.20.2 Course Objectives**

This course reviews the basic knowledge and theory of financial management, provides a practical teaching environment and guides students to practice on computer. The aim of this course is to make students familiar with and master the basic methods and skills of financial management, to improve their ability to apply financial knowledge, and to lay a good foundation for their further study.

### **2.1.20.3 Course Contents**

This course covers the key points of the financial management course, embracing discussions in the following aspects: securities valuation, company valuation, financial statement analysis, project investment decision, fixed asset renewal decision, venture investment decision, capital requirement forecast, leverage analysis, capital structure analysis,

cash management, short-term bank loan management, accounts receivable management, dividend distribution, risk and return analysis, etc. .

#### **2.1.20.4 Course Methods**

This course adopts the methods of classroom teaching, practice teaching, group discussion, after-class homework and so on.

#### **2.1.20.5 Teaching Language**

Chinese.

#### **2.1.20.6 Reference Books**

Financial Management (6th Edition), by Wang Huacheng et al., Renmin University of China Press, 2020.

Corporate Finance, by Stephen A. Ross et al., Machinery Industry Press, 2017.

Financial Management, by Jing Xin et al., Renmin University of China Press, 2018.

Simulation Experiment Course of Financial Management, by Ma Yuanju, Renmin University of China Press, 2015.

### **2.1.21 RPA and Financial Robots**

#### **2.1.21.1 Course Description**

The course is an automation technology course focused on the finance field, aimed at helping students master how to use RPA technology to

achieve finance business automation. The course will provide in-depth introduction to the basic concepts, workflow, and practical applications of RPA technology, helping students understand how to use RPA robots to automate common financial business processes such as financial reporting, accounting vouchers, and account settlement. By studying the RPA Financial Robot Course, students can effectively improve the efficiency and accuracy of financial processes, contributing to the digital transformation of enterprises.

#### **2.1.21.2 Course Objectives**

The course aims to train students to master the application of Robotic Process Automation (RPA) technology in the financial field. This course will enable students to learn how to use RPA to automate financial processes, improve work efficiency, and reduce error rates. In addition, this course will also introduce the basic concepts, working principles, and implementation methods of financial robots. By studying this course, students will gain the following skills and knowledge: Understand the concept and advantages of financial robots, master the basic principles and application methods of RPA technology, familiarize with the steps and workflows that can be automated in financial processes, proficiently use financial robots to complete common financial tasks.

#### **2.1.21.3 Course Contents**

The course curriculum includes an introduction to RPA technology

fundamentals, an overview of financial robots, an introduction to commonly used RPA software, the usage and basic syntax of UiPath software, automation of Excel operations, automation of PDF reading, automation of web applications, development of UiPath financial robots such as DuPont financial analysis.

#### **2.1.21.4 Course Methods**

classroom lectures, hands-on experiments, and exercises after class.

#### **2.1.21.5 Teaching Language**

Chinese.

#### **2.1.21.6 Reference Books**

RPA Financial Robot Development Tutorial - Based on UiPath (2nd Edition), by Cheng Ping, Publishing House of Electronics Industry, 2021.

RPA Financial Robot Development and Application (Basic Edition), by Sun Yuefan, China Renmin University Press, 2021.

RPA Financial Robot: Principle, Application and Development, by Cheng Ping, China Renmin University Press, 2022.

### **2.1.22 Investment**

#### **2.1.22.1 Course Description**

Base on the learning objective of the course, systematically introduce the basic principles of securities investment and securities analysis. Through the study of this course, students will understand the role of the securities

market in the economic system, grasp the basic concepts of securities and the basic principles of securities market operation and investment. And the students should be able to use these principles to perform actual full investment analysis and make investments that avoid risks and obtain returns. It also enables students to understand the latest developments in the development of the Chinese and international securities markets and the changes in investment theories.

#### **2.1.22.2 Course Objectives**

After completing the study of this course, students will deeply understand the basic theory, method and skills of investment, and require students to accurately understand the basic scope of investment. Understand the main contents, links, basic processes and rules of investment activities in general. Better understanding of the relationship among the investment and capital market, economic growth, industrial structure change. Familiar with the basic methods of real investment and securities investment decision-making, and have the basic ability to analyze and solve the practical problems of investment.

#### **2.1.22.3 Course Contents**

The content of this course is divided into the following parts: introduction to investment, including the investment environment, financial markets and financial instruments, how to trade securities, mutual funds and other investment companies; Portfolio and capital market equilibrium theory,

including risk and risk aversion, capital allocation between risky assets and risk-free assets, optimal portfolio of risky assets, capital asset pricing model, single index and multi-factor model, arbitrage pricing theory, market efficiency; The third part is the securities analysis, including macroeconomic analysis and industry analysis, company analysis, investment technology analysis.

#### **2.1.22.4 Course Methods**

This course adopts three teaching methods, namely classroom teaching, network teaching and practice teaching, and gives full play to the advantages of the three teaching methods, so as to combine classroom teaching with network learning, theoretical teaching and practice teaching, and students' self-study.

#### **2.1.22.5 Teaching Language**

English.

#### **2.1.22.6 Reference Books**

1. Zvi Bodie, Alex Kane, Alan J. Alan J. Marcus, Problem Sets on Investment (10th Edition), China Machine Press, 2018.
2. Zvi Bodie, Alex Kane, Alan J. Marcus (Alan J. Marcus), Translated by Chu Chen, Essentials of Investment (7th edition), China Renmin University Press, 2010
3. Charles J. Corrado, Bradford D. Jordan, Bai Bai, Hu Boyi, Fundamentals of Investment: Valuation and Management (3rd Edition),



Peking University Press, 2007

4. Bodi, Notes and Explanations of Exercises in Investment (7th Edition),  
China Petrochemical Press, 2010

5. Edwin J. Elton, Martin J. Gruber, Stephen J. Brown, William N. Goetzmann, Modern Portfolio Theory and Investment Analysis (6th Ed.),  
China Renmin University Press, 2006

6. Zvi Bodie, Robert C. Merton, David L. Cleeton, Liu Chengyi, Finance  
(2nd Ed.), China Renmin University Press, 2010

### **2.1.23 Machine Learning in Corporate Finance**

#### **2.1.23.1 Course Description**

This course introduces the application of machine learning in the financial field. With the growth of data and the development of technology, machine learning has become an indispensable part of the financial field. This course will introduce the basic principles and algorithms of machine learning, and discuss how to apply these algorithms to financial analysis, investment decision-making, risk assessment and prediction. Through this course, students will learn how to use machine learning technology to improve the efficiency and accuracy of the financial field.

#### **2.1.23.2 Course Objectives**

This course will help students better understand and apply machine

learning technology through case analysis and practical projects, and provide practical tools and skills. By attending this course, students will learn how to use machine learning to solve practical problems in the financial field, acquire practical skills and tools in the fields of financial analysis, data mining and artificial intelligence, and understand the latest research and application of machine learning in the financial field, including natural language processing, blockchain technology and quantitative trading.

#### **2.1.23.3 Course Contents**

The teaching content of this course mainly includes the basic principles and common algorithms of machine learning - supervised learning, unsupervised learning and deep learning, such as classification, regression, clustering and neural network, etc. How to use third-party libraries such as Scikit learn, TensorFlow and Keras in Python to implement machine learning models, and learn the application cases of machine learning in the financial field, such as stock price prediction.

#### **2.1.23.4 Course Methods**

Classroom lectures, hands-on experiments, and exercises after class.

#### **2.1.23.5 Teaching Language**

English

#### **2.1.23.6 Reference Books**

Python Business Data Analysis, by Zhang Jin and Weng Zhangwen,

China Renmin University Press, 2021.

Introduction to Machine Learning, by Zhang Xudong, Tsinghua University Press, 2022.

Python Data Mining and Machine Learning, by Wei Weiyi and Zhang Guozhi, Tsinghua University Press, 2021.

## **2.1.24 Database Theory and Application**

### **2.1.24.1 Course Description**

Database Theory and Application is an important branch of computer science and has become the core technology and important foundation of information infrastructure. As the most effective means of data management, database technology has greatly promoted the development of computer application. This course systematically tells the basic theory, basic technology and basic methods of database system, and provides the necessary database knowledge for software and application developers.

### **2.1.24.2 Course Objectives**

The aim of this course is to introduce students to the concepts of information management by way of databases, including relational databases, relational algebra, functional dependency theories, and other data management and analytics solutions. The course will provide students with the opportunity to develop skills which will assist them to manage information in the current digital age.

### **2.1.24.3 Course Contents**

The course is given in 4 units , embracing discussions in the following aspects: introduction and concepts of the database system; the installation and configuration of SQL Server; the operation of database objects and data, and database management.

### **2.1.24.4 Course Methods**

Lectures and discussion

### **2.1.24.5 Teaching Language**

Chinese.

### **2.1.24.6 Reference Books**

- 1.He Guiying, Database Principles and Applications - SQL Server 2008, China Renmin University Press, 2013.
2. Wang Qing, Relational Database and SQL Server Tutorial, China Renmin University Press, 2009.

## **2.1.25 Economic Law**

### **2.1.25.1 Course Description**

Economic Law is a basic elective course for business majors, which systematically introduces the knowledge of law system, civil law-related system, commercial law-related system, and economic law-related system. As a practical application course, economic law not only provides assistance for students of business major to master the necessary

economic legal knowledge for participating in economic activities, but also cultivates legal concepts and basic abilities of students to use legal knowledge for protecting their legal rights and interests. In addition, this course lays the foundation for students to successfully pass relevant vocational qualification examinations in the future.

### **2.1.25.2 Course Objectives**

Upon completion of this course, successful students should be able to:

1. identify and critically assess the rationale behind legal designs and procedures from an economic perspective;
2. recognise the limitations of the law and legal practices; and
3. apply the models and theories learnt from this course to critically evaluate debates about legal rules and engage in dialogues over how legal reforms may be pursued to further public interest.

### **2.1.25.3 Course Contents**

The course is given in 7 units, embracing discussions in the following aspects : the concept, characteristics and basic principles of law; The concept and legal effect of the basic civil legal system, such as the civil legal act system, the agency system, and the limitation of action system; The concept, characteristics, classification, change mode of real right and

bona fide acquisition system of things; The scope of application of the Contract Law, the classification of contracts, the relativity of contracts, the steps of contract conclusion, the effectiveness, performance and guarantee of contracts; The basic concept and system of company law, the legal system of joint stock limited company and the legal system of limited liability company; Overview of securities legal system, issuance of stocks, issuance and trading of bonds, listing and trading of stocks; Overview of payment and settlement and bill legal system.

#### **2.1.25.4 Course Methods**

Lectures and discussions; case study

#### **2.1.25.5 Teaching Language**

Chinese

#### **2.1.25.6 Reference Books**

1. Zhao Wei: Economic Law, China Renmin University Press, 2021;
2. Deng Lianwen: Basic Knowledge of Economic Law, China Financial and Economic Publishing House, 2017;
3. Li Yongxin: Basic Knowledge of Law, People's Daily Press, 2020.

### **2.1.26 Literature Retrieving and Thesis Writing**

#### **2.1.26.1 Course Description**

Literature Retrieving and Thesis Writing is a methodology course that integrates professional theory, method and practice, which can stimulate

college students' innovation consciousness and cultivate their writing ability. By learning this course, college students can acquire certain ability of collecting, sorting, processing and utilizing literature information, which lays a solid foundation for course thesis or graduation thesis writing. This course mainly teaches theories and methods, supplemented by literature collection, study and professional paper writing, so that students can apply what they have learned

### **2.1.26.2 Course Objectives**

Through the teaching of this course, students will be able to:

1. master the basic knowledge of literature information retrieval, be familiar with various literature retrieval systems and methods, acquire the literature information needed in learning and scientific research activities skillfully;
2. have a certain understanding of Chinese laws, regulations and common sense in information security and intellectual property, make students form the consciousness and concept of using literature resources responsibly;
3. familiarize students with professional thesis writing methods, theories, paradigms and academic ethics, and to lay a solid foundation for future work or

### **2.1.26.3 Course Content**

About literature retrieval, including introduction to literature retrieval,

computer information retrieval, domestic large full-text database retrieval, foreign large comprehensive retrieval system and digital library and so on. About thesis writing, including management research framework, criticism of ethical and anti-ethical behaviors in management research, protection of research results, research topic selection (management research topic selection and evaluation, innovative topic selection methods, construction of research and research time management), research plan and method selection (exploratory research and its method selection, descriptive research and its method selection, explanatory research and its method selection), Qualitative research methods (selection of qualitative research, field research method, case study method, grounded theory method, etc.), quantitative research method (emphasis on descriptive statistics and linear regression method), research paper writing (undergraduate dissertation writing and comparative analysis with master's thesis writing), and research paper writing paradigm

#### **2.1.26.4 Course Methods**

Offline teaching in normal circumstances, online teaching in special periods, or a combination of online and offline teaching methods. The teaching is mainly based on concept explanation, theoretical analysis and reading practice after class, assisted by case teaching and appreciation of classic papers. At the same time, students are encouraged to actively



develop professional paper writing, so as to realize the organic integration of theory and writing practice.

#### **2.1.26.5 Teaching Language**

Chinese.

#### **2.1.26.6 Reference Books**

1. Research Methods of Management (4th Edition), Yang Du, Dongbei University of Finance and Economics Press, 2022.
2. Empirical Methods of Organization and Management Research(3rd Edition), Xiaoping Chen et al., Peking University Press, 2018.
- 3.Stata Statistical Analysis and Application (3rd Edition), Huihui Ma, Publishing House of Electronics Industry, 2016.
- 4.SPSS Statistical Analysis Method and Application (4th Edition), Xue Wei, Publishing House of Electronics Industry, 2017.
5. Introduction to Empirical Research Methods of Management, Huang Xiaozhi et al., China Machine Press, 2017.
6. Literature Retrieval and Paper Writing (3rd Edition), Fumin Deng, Xuedong Liang, Economic Management Publishing House, 2018

#### **2.1.27 Intelligent Financial Shared Services**

##### **2.1.27.1 Course Description**

Given on the business model of enterprises deeply affected by big data, intelligence, cloud computing and other new technologies, the new era of

managerial accounting system with financial sharing and intelligent analysis as the core is gradually formed since the demand for enterprise management have been not satisfied the traditional model of financial management dominated by accounting. Accounting practitioner can improve the capability both in integration of industry and finance and data analysis based on the accumulation of knowledge and professional skills in accounting as to provide the support of company's decision-making process. The course applies the simulation of business activities in a case company, including the background of business activities, the procedures and example of business activities, which attributes to the students' ability in consolidation of theories and practice through the simulation.

#### **2.1.27.2 Course Objectives**

Given the practice in the simulation of business activities in a case company, the student will be able to:

1. understand the composition and principle of financial shared service centre (FSSC).
2. have the ability to accomplish the tasks proposed by business models of financial shared service centre.
3. acquire the skills of judgement on the accuracy of documents in business models of financial shared service centre.

#### **2.1.27.3 Course Contents**

The course is given in 15 units, embracing discussions in the following aspects:

The concepts of financial shared service, the development of financial shared service centre, the simulation of regular models of financial shared service centre (including expense reimbursement, asset management, contract, salary reimbursement, and taxation)

#### **2.1.27.4 Course Methods**

Teaching Methods: Lectures and Discussions, The training on financial shared service centre (Web-site source)

#### **2.1.27.5 Teaching Language**

Chinese

#### **2.1.27.6 Reference Books**

1. Financial Shared Service Theory and Practice, by Lu Chuang, China Renmin University Press, 2021.
2. Intelligent Upgrade on Financial Shared Service, by Jia Xiaoqiang, Posts & Telecom Press, 2020.
3. Blockchain, Artificial Intelligence and Financial Services, by Sean Stein Smith, China Machine Press, 2022.

### **2.1.28 Corporate Strategy and Risk Management**

#### **2.1.28.1 Course Description**

The course presents theories and measurement tools of company strategy and risk management, which enables students to understand the main knowledge and method of corporate strategy and risk management,

propose solutions to problems incurred from corporate risk issues, cultivates student's practical skills, and enhance professional ethics. This course also aims at assisting students to prepare the CPA exam in the future.

### **2.1.28.2 Course Objectives**

To introduce the decision-making process of the company's strategic activities from the perspective of risk management and control, the student will be able to:

- (1) acquire the fundamental theories of strategic management and risk management;
- (2) understand the procedures and methods of corporate strategic management formulation;
- (3) understand the sources and characteristics of enterprise risks and apply the methods of risk management and control.

### **2.1.28.3 Course Contents**

The course is embracing discussions in the following aspects: The fundamental of strategy and strategic management, strategic analysis (including internal environment analysis, external environment analysis and SWOT analysis), strategic choice (including company-level strategy, business strategy and internationalization strategy choice), strategy implementation, strategic control and financial strategy; the procedures of risk management, risk management system and technical methods of risk

management, internal control under the framework of risk management, and the internal relationship among risk management, internal control and corporate governance.

#### **2.1.28.4 Course Methods**

Teaching Methods: Lectures, Case Study, Group Discussion

#### **2.1.28.5 Teaching Language**

Chinese

#### **2.1.28.6 Reference Books**

1. Corporate Strategy and Risk Management, by Lv Wendong, China Renmin University Press, 2020.
2. Corporate Strategy and Risk Management: Theory, Practice, and Case, the 2nd Edition, by Fang Guangzheng, Xidian University Press, 2020.
3. Corporate Strategy and Risk Management, by Zhao Rui, Dalian University of Technology Press, 2017.
4. Corporate Strategy and Risk Management, by Editors, China Financial & Economic Publishing House, 2021.

### **2.1.29 Big Data and Business Analysis**

#### **2.1.29.1 Course Description**

Big Data and Business Analysis is an elective professional course for Financial Management major, as well as a highly comprehensive simulation course. This course aims to enable students to master certain

information technology, understand data, structured data, display data and other processes, and learn to understand the logical relationship between business data and financial data from the perspective of managers, so as to serve managers' management decisions.

### **2.1.29.2 Course Objectives**

This course cultivates students' structural understanding of business data and financial data, requires students to analyze simulated business scenario problems through experimental sessions, master the integrated analysis approach of financial business, and present their own business analysis logic through the application of BI technology, thus enhancing students' insight and understanding of management decision-making.

### **2.1.29.3 Course Contents**

This course introduces cases from different perspectives such as business characteristics, leadership focus, management pain points, current hotspots, etc., to define data and business. It teaches students to master analysis logic such as data mining, data analysis, business analysis, etc., and cultivate data thinking. Students use BI technology to conduct business analysis based on case scenario data, and build dashboards that can show their own analysis logic.

### **2.1.29.4 Course Methods**

The course is mainly based on student practice, supplemented by teacher theoretical teaching. It adopts a blended teaching method of online and

offline.

### **2.1.29.5 Teaching Language**

Chinese.

### **2.1.29.6 Reference Books**

- 1.Wang Gang, Jin Chunhua et al., eds., Enterprise Operation and Financial Intelligence Analysis Visualization, Tsinghua University Press, 2022
- 2.Niu Yanfang , Intelligent Financial Analysis Visualization , Higher Education Press , 2021
3. Mou Enjing, Li Jiechen, POWBI Intelligent Data Analysis and Visualization, China Machine Press, 2019

## **2.1.30 Machine Learning and financial data analysis**

### **2.1.30.1 Course Description**

This course, Machine Learning and financial data analysis, introduces machine learning algorithms (models) and their applications in financial problems. It covers classification, regression, clustering, text analysis, time series analysis. It also discusses model evaluation and model optimization. This course provides an entry point for students to be able to apply proper machine learning models on business related datasets with Python to solve various problems. Accounting Data Analytics with Python is a prerequisite for this course , and covers the next two steps in

the process, modeling and model evaluation. Upon completion of this course, students should be able to complete an entire data analytics process with Python.

### **2.1.30.2 Course Objectives**

Through the information-based teaching method, it is convenient for students to deeply understand the knowledge of machine learning and financial data processing, flexibly apply the theoretical knowledge learned to the actual intelligent accounting operation, and optimize the traditional financial data processing and analysis methods with the help of machine learning technology. This course focuses on cultivating students' innovative thinking and aims to better train application-oriented accounting personnel for the school.

### **2.1.30.3 Course Contents**

This course will introduce the basic concepts and processes of machine learning, including data preprocessing, division of training sets and model evaluation, etc., introduce supervised learning algorithms, such as linear regression, logical regression, decision tree, support vector machine, naive Bayes, etc., and analyze and apply them in combination with actual cases, and introduce unsupervised learning algorithms, such as clustering, principal component analysis, etc. At the same time, the course will also introduce some commonly used financial indicators and analysis methods, as well as how to use Python for data processing and visualization, and



cultivate students' ability of data analysis and programming practice.

#### **2.1.30.4 Course Methods**

Classroom teaching and computer experiments are combined, supplemented by after-class exercises.

#### **2.1.30.5 Teaching Language**

Chinese.

#### **2.1.30.6 Reference Books**

Introduction to Machine Learning, by Zhang Xudong, Tsinghua University Press, 2022.

Python Business Data Analysis, by Zhang Jin and Weng Zhangwen, China Renmin University Press, 2021.

Python Big Data Analysis and Machine Learning Business Case Practice, by Wang Yutao and Qian Yanzhu, China Machine Press, 2020.

### **2.1.31 Theory and Practice of Private Equity Investment**

#### **2.1.31.1 Course Description**

From the perspective of investors' concern, the course introduces the causes, mechanism, and performance for the involvement of private equity funds in the capital market through the application of theories and practical knowledge among economics, finance, accounting and financial management. The course is to introduce the general rules of private equity funds participating in the capital market, including the concept of private equity funds, organizational forms, procedures, valuation,

investment methods and principal-agent relationships. This course further analyses the performance of private equity investment through case study.

### **2.1.31.2 Course Objectives**

To enable students understanding the investment methods of private equity funds and the governance approaches to participate in the decision-making of invested units. Students will be able to:

- (1) understand the meaning and characteristics of private equity investment, the difference between private equity investment and venture capital investment, and the development status of private equity investment in China;
- (2) acquire the valuation and methods of invested units given on the organizational form and operation process of private equity funds;
- (3) apply principal-agent theories to analyse the methods and effects of private equity funds participating in the decision-making of invested units given on the investment tools and methods of private equity funds.

### **2.1.31.3 Course Contents**

The course is embracing discussions in the following aspects: the concept of private equity investment, the difference between private equity investment and venture capital investment, the characteristics of private equity investment and its funds, the origin of private equity funds and the development status of private equity funds in China; the organizational forms of private equity investment (such as, corporate system, trust

system and limited partnership) and its comparison, the process of private equity investment, the composition of firm value, valuation methods and their comparison, common stock valuation methods, discounted cash flow method; private equity investment tools and their exit methods, the Principle-Agent relationship of private equity investment (including basic analysis framework, information asymmetry between fund investors and fund managers, and information asymmetry between fund managers and investees), case analysis of private equity investment funds

#### **2.1.31.4 Course Methods**

Teaching Methods: Lectures, Case Study, Group Discussion

#### **2.1.31.5 Teaching Language**

Chinese

#### **2.1.31.6 Reference Books**

1. Private Equity: Theory and Cases, by Li Lianfa, China Development Press, 2008.
2. Family Control, PE Investment and Corporate Governance of Private Listed Firm, by Su Qilin, Economic Science Press, 2013.
3. Practical Theory and Applicable Research on Foreign Private Equity Funds, by Sun Zhichao, China University of Political Science and Law Press, 2015.
4. A Roadmap of Private Equity Investment, by Lu Mingming, Posts & Telecom Press, 2016.

5. Private Equity Investment in China: Institutional Environment, Corporate Governance, and Earnings Quality, by Wang Huijuan, Lixin Accounting Publishing Press, 2018.

### **2.1.32 Enterprise listing strategy and practice**

#### **2.1.32.1 Course Description**

Enterprise listing strategy and practice are designed to help students learn the listing operation process, effectively carry out investment and financing management, master the realistic path to enhance the value of enterprises, and promote the integration of business advantages. The course covers strategic planning and macro-environmental analysis of IPOs, top-level design and equity incentives, pre-IPO restructuring and mergers and acquisitions, corporate transformation and upgrading and capital operation practices, IPO capital planning and strategy, choice and opportunity of listing paths, financing scheme design and overall planning.

#### **2.1.32.2 Course Objectives**

Through the teaching of this course, students majoring in financial management will cultivate the capital operation concept, enable students to master the basic theories and basic analysis methods involved in the course, and cultivate students' ability to independently analyze and solve capital management problems through typical cases of enterprise listing

at home and abroad.

### **2.1.32.3 Course Contents**

The basic conceptual principles and basic theories of capital operation, capital raising, capital movement and value-added processes, including corporate listing, bond financing, M&A decision-making, strategic alliances, share repurchases, transnational capital operations, etc.; Path selection and process operation of enterprise capital operation, risk and management of capital operation, decision analysis of venture capital. Strategic planning for enterprise listing, pre-IPO restructuring, mergers and acquisitions, IPO capital planning and strategy, selection and opportunities of listing path, etc.

### **2.1.32.4 Course Methods**

Lectures and discussion.

### **2.1.32.5 Teaching Language**

Chinese.

### **2.1.32.6 Reference Books**

1. Overseas Financing II. Interpretation of the Listing Path of 20 Enterprises, by Gao Jianzhi, Tsinghua University Press, 2021.
2. Guidelines for the Whole Process of Enterprise Listing (4th Edition), by Zhou Hong, CITIC Press, 2019.
3. The solution to the listing of enterprises ("Those Things Going Public", by Investment Bank Soldier, Law Press, 2013.

4. IPO Listing Strategy: In-depth Analysis of Legal Compliance Issues, by Bai Xiaofei, Law Press, 2019.

### **2.1.33 Quantitative Investment Strategy**

#### **2.1.33.1 Course Description**

This course provides students with a fundamental understanding of the principles and analytics of asset management as applied to both institutional and private clients. Students aspiring to a career in asset, portfolio, private wealth, endowment, or pension fund management will find this course useful. This course will cover three main problems all investors, to varying degrees, have to face,

1. Asset Allocation issues - How do investors quantitatively decide on the level of capital to allocate to individual asset classes?
2. Implementation issues - How to quantitatively implement the asset allocation through security selection and trading, when considering both timeliness and costs?
3. Trading strategies issues- How do investors use quantitative methods and available instruments to achieve investment profits?

#### **2.1.33.2 Course Objectives**

Upon successful completion of this course, students should be able to, Identify mainstream institutional investors, such as banks, insurance companies, mutual funds, pension funds, etc. and their respective

investment objectives.

Master the analytic framework to make thorough and complete investment decisions, including drafting IPS (Investment Policy Statements), conducting top-down/bottom up analyses, setting monitoring and rebalancing protocols, and appraising investment performance.

Gain proficiency in collecting data, building quantitative models, and implementing trading strategies in real-world scenarios.

### **2.1.33.3 Course Contents**

#### Part I Investors

Individual Investors

Institutional Investors

IPS (Investment Policy Statements)

#### Part II Quantitative Investment Analyses

Overview of Securities Markets

Asset Classes and Asset Allocation

Equity Investment Analyses

#### Part III Real-World Investment

Trading Mechanism and Market Microstructure

Monitoring and Rebalancing

Performance Attribution and Appraisal

#### Part IV

Directional Strategies

Event-Driven Strategies

Arbitrage Strategies

#### **2.1.33.4 Course Methods**

Lectures and discussions, investment term project.

#### **2.1.33.5 Teaching Language**

English.

#### **2.1.33.6 Reference Books**

基本面量化投资：运用财务分析和量化策略获取超额收益，张然，汪荣飞，北京大学出版社，2017，9787301325445

投资学（原书第10版），滋维·博迪等著，汪昌云 张永骥等译，机械工业出版社，2017，9787111568230

### **2.1.34 Investment Banking**

#### **2.1.34.1 Course Description**

The course is an elective course for financial management major (capital quantification direction), is an emerging discipline in the financial field. It is an important course in the undergraduate education of financial management. This course is based on the business operation practice of modern investment banks as the basic material, explain the functions of investment banks, organizational structure and supervisor of the investment banking. Systematically introduce the basic principles, operating mechanisms and management methods of investment banking,



discuss the basic theory and practical problems of the development of the investment banking.

#### **2.1.34.2 Course Objectives**

Through this course, students can understand the basic concepts and common terms of investment banking, understand the basic business of investment banking, master the characteristics, rules and the relationship and differences of various business in common use, and get familiar with the basic steps and methods of various work, aiming at cultivating and improving students' ability to master and apply investment banking business. And lay the foundation for students to work in securities companies and related research and management in the future.

#### **2.1.34.3 Course Contents**

The teaching content of investment banking includes: overview of investment banks, design of corporate financing schemes, limited stock companies and initial public offerings, refinancing of listed companies, bond issuance and underwriting, asset securitization, corporate mergers and acquisitions, risk management of investment banks, and supervision of investment banks.

#### **2.1.34.4 Course Methods**

Based on the content of the textbook, this course adopts three teaching methods, namely classroom teaching, network teaching and practice teaching, and gives full play to the advantages of the three teaching

methods, so as to combine classroom teaching and network learning, theoretical teaching and practice teaching, teacher teaching and students' self-study.

#### **2.1.34.5 Teaching Language**

English

#### **2.1.34.6 Reference Books**

1. Ma Xiaojun, Ed., Investment Banking: Theories and Cases (3rd Edition), China Machine Press, 2020.
2. He Xiaofeng, Huang Song, Investment Banking (2nd Ed.), Peking University Press, 2008
3. Li Zhi Tang, Jing Luo et al., Investment Banking, Tsinghua University Press, 2014
4. Ruan Qingsong, Yu Ping, Introduction to Investment Banking, Dongbei University of Finance and Economics Press, 2013

#### **2.1.35 Quantitative transaction**

##### **2.1.35.1 Course Description**

The content of quantitative transaction goes from simple to deep, basically covering most of the methods and contents in the field of modern financial metrology. The introduction of financial econometrics is not only a detailed description of the basic knowledge, but also an illustration of the practical case application. In particular, it shows

students how to use financial econometrics to analyze and study real financial problems through examples of real data in the financial market.

### **2.1.35.2 Course Objectives**

This course aims to help students understand the basic principles and practical skills of quantitative trading, master the strategies and methods of quantitative trading, and improve the practical ability and experience of quantitative trading. Through the study of this course, students will be able to understand the concept and background of quantitative trading, master the basic process and realization method of quantitative trading, be familiar with the common strategies and tools of quantitative trading, and understand the risk management and portfolio optimization techniques of quantitative trading. In addition, this course will also help students practice the skills and methods of quantitative trading and improve their practical ability and experience through practical cases and simulated trading. Finally, students will be able to use quantitative trading technology to effectively invest and trade in the financial market.

### **2.1.35.3 Course Contents**

The teaching content of this course includes introducing the concept and history of quantitative trading, data processing methods and statistical indicators involved in quantitative trading, regression analysis and time series analysis, mean value regression strategy, momentum strategy, event-driven strategy, fundamental strategy, risk management principles

and methods, portfolio construction and optimization methods, etc., so that students can understand the practical application and market performance of quantitative trading.

#### **2.1.35.4 Course Methods**

Classroom lectures, hands-on experiments, and exercises after class.

#### **2.1.35.5 Teaching Language**

Chinese.

#### **2.1.35.6 Reference Books**

1. Introduction to Quantitative Trading and Python Practice, by Qin Xiongpai and Chen Yueguo, China Renmin University Press, 2021.
2. Factor Investment: Method and Practice, by Shi Chuan, Liu Yangyi and Lian Xiangbin, Publishing House of Electronics Industry, 2020.
3. Python and Quantitative Investment: From Basic to Practice, by Wang Xiaochuan, Publishing House of Electronics Industry, 2018.

### **2.1.36 Machine Learning and Financial Data Mining**

#### **2.1.36.1 Course Description**

This course applies machine learning to financial data mining, integrating theoretical knowledge and methodology of economics, statistics, computer science and other disciplines. The content covers the basic knowledge of machine learning, including the basic concepts of supervised learning, unsupervised learning and reinforcement learning, as

well as some popular machine learning algorithms, such as linear regression, decision tree, support vector machine, etc. Some case studies and practical projects based on Python are designed to teach students how to use machine learning algorithms and technologies to solve practical problems.

### **2.1.36.2 Course Objectives**

Through colorful teaching activities, students can master the basic concepts of artificial intelligence and basic knowledge of machine learning, understand the categories of machine learning algorithms, master the basic principles of regression and classification, clustering and dimensionality reduction, and understand Python's data analysis and machine learning modules, such as Numpy, Pandas, Scikit learn, so as to better handle financial data and solve practical problems, It includes how to find useful patterns and trends from large-scale data sets, how to build prediction models and evaluate their effects.

### **2.1.36.3 Course Contents**

The course is divided into nine units, including the overview of machine learning and data mining, understanding data, data preprocessing, regression of supervised learning, classification of supervised learning, unsupervised learning (clustering and dimensionality reduction), ensemble learning, association analysis and neural network exploration.

### **2.1.36.4 Course Methods**

Classroom lectures, hands-on experiments, and exercises after class.

### **2.1.36.5 Teaching Language**

Chinese.

### **2.1.36.6 Reference Books**

Introduction to Machine Learning with Python, by Andreas C. Muller and Sarah Guido, O'Reilly Media, 2018.

Python Data Mining and Machine Learning, by Wei Weiyi and Zhang Guozhi, Tsinghua University Press, 2021.

Python for Finance: Analyze Big Financial Data, by Yves Hilpisch, O'Reilly Media, 2014.

## **2.1.37 Financial Engineering**

### **2.1.37.1 Course Description**

Financial Engineering is an elective professional course for Financial Management major. It is an interdisciplinary subject that uses the theories and methods of finance, mathematics and computer science comprehensively to solve practical financial issues. The main purpose of this course is to systematically elaborate some basic concepts and theoretical methods of financial engineering. The overall structure of the course follows the framework of "introduction of financial derivatives - financial asset pricing - principle application", and provides creative solutions to various financial problems by using major financial

derivatives such as forward, futures, options and swaps.

### **2.1.37.2 Course Objectives**

The main purpose of this course is to enable students to understand the basic theories and pricing methods of financial engineering, and use relevant methods to make financial decisions. More specifically, the students will be able to:

Understand the main tools, basic purpose, knowledge base and main analysis methods of financial engineering.

Know the basic pricing principles of financial derivatives.

Use financial derivatives to provide financial solutions for financial market participants.

### **2.1.37.3 Course Contents**

The course will introduce the basic characteristics and market mechanism of forward and futures, including the principles and applications of forward and futures pricing, such as stock index futures, foreign exchange forward, interest rate forward and interest rate futures; The basic characteristics and market mechanism of swap, the principle of swap pricing, and the application of swap in arbitrage, risk management and new product design; The basic characteristics and market mechanism of options, option pricing theory, trading strategy and application of options, etc.

### **2.1.37.4 Course Methods**

The content of the financial engineering course integrates mathematical models, financial statistics and computer programming, etc. The course is given in a combination of lectures, discussion, practice, online self-learning and other teaching methods.

### **2.1.37.5 Teaching Language**

Chinese.

### **2.1.37.6 Reference Books**

John Hull. Option, Futures and Other Derivatives (10th ed.), Prentice Hall 2018.

1. Zheng Zhenlong, Chen Rong. Financial Engineering (5th edition), Higher Education Press, 2020.
2. John Hull. Option, Futures and Other Derivatives (10th edition), Prentice Hall 2018.
3. Zhang Yichun, Zheng Zhenlong, Lin Hai. Financial Market (6th edition), Higher Education Press, 2020.
4. Lin Qingquan. Financial Engineering (5th edition), China Renmin University Press, 2018.
5. Song Fengming. Principles of Financial Engineering, Tsinghua University Press, 1999.

## **2.1.38 Financial Econometrics**

### **2.1.38.1 Course Description**



This course is an elective course for financial management major (capital quantification direction). It is an important course in the undergraduate education of financial management. The task of this course is to lay the methodological foundation of quantitative analysis and empirical research in finance for subsequent courses. Financial Metrology combines quantitative methods using the statistic software to understand and analyze financial issues, has strong applicability and maneuverability. This course mainly introduces the general concepts and working steps of financial metrology, basic methods of model estimation, model checking and correction methods, application cases of econometric models.

### **2.1.38.2 Course Objectives**

The main purpose of this course is to introduce students to the basic theories, models and methods of modern financial meteorology. This course cultivates students' ability to build financial econometric models with the help of econometric analysis software on the basis of economic and financial theories. This course broadens students' thinking of analyzing and researching real economic and financial problems, and strengthens students' quantitative analysis and practical ability.

### **2.1.38.3 Course Contents**

This course covers: The first part is the basis of financial econometrics, which mainly includes unary linear regression model, multiple linear regression model, regression model after relaxing basic assumptions,

dummy variable model, nonlinear model, etc. The second part is the financial time series model. It mainly includes unit root test, autoregressive moving average model, co-integration test, modified error model, generalized autoregressive conditional heteroscedasticity model, etc. It mainly introduces to students the financial econometrics empirical research of domestic and foreign scholars.

#### **2.1.38.4 Course Methods**

This course adopts three teaching methods, namely classroom teaching, network teaching and practice teaching, and gives full play to the advantages of the three teaching methods, so as to combine classroom teaching with network learning, theoretical teaching and practice teaching, and students' self-study.

#### **2.1.38.5 Teaching Language**

Chinese.

#### **2.1.38.6 Reference Books**

1. Frank. J. Fabocchi et al., Fundamentals of Financial Econometrics: Tools, Concepts, and Asset Management Applications, China Machine Press, 2019.
2. Tang Yong, Zhu Pengfei, Financial Metrology (2nd Edition), Tsinghua University Press, 2019.
3. Zhang Chengsi, Financial Econometrics: A Perspective of Practice Sequence Analysis (3rd Edition), China Renmin University Press, 2020.