

# Capital University of Economics and Business

## Overseas Chinese College

### Course Syllabus

|                                   |   |
|-----------------------------------|---|
| <b><u>Year and Semester</u></b>   | Fall 2022 (September 5, 2022— January 16, 2023)   |
| <b><u>Course Name</u></b>         | Fixed Income Securities   |
| <b><u>Course Code</u></b>         | FI304   |
| <b><u>Course Type</u></b>         | <input type="checkbox"/> General Education (Required) <input type="checkbox"/> General Education (Elective)<br><input type="checkbox"/> Professional Course (Required) <input checked="" type="checkbox"/> Professional Course (Elective)<br><input type="checkbox"/> Basic Disciplinary Course |
| <b><u>Course Credits</u></b>      | 3   |
| <b><u>Course Hours</u></b>        | 3*17=51   |
| <b><u>Prerequisites</u></b>       | None  |
| <b><u>Instructor</u></b>          | Manqiu Wei (Eunice Wei)   |
| <b><u>Contact Information</u></b> | Office: C203<br>Tele: (010)8395 1085<br>Email: eunicewei2013@163.com  |
| <b><u>Office Hour</u></b>         | M 11:35-12:20; T 15:25-16:10; W 8:50-9:35; TH 11:30-16:10;  |
| <b><u>Learning Centre</u></b>     | M 9:55-11:30; T 18-20 (online)  |
| <b><u>Grade/Section</u></b>       | 2019ACCA Y01/Y02  |
| <b><u>Course Time/Place</u></b>   | Y01 T: 9:55-12:20/A106; Y02 TH: 9:55-12:20/A101   |
| <b><u>Textbook</u></b>            | Frank J. Fabozzi. <i>Bond Markets, Analysis and Strategies</i> , 9 <sup>th</sup> Edition, Renmin University Press, Beijing, ISBN: 978-7-300-25225-4   |

#### **Reference Books**

1. Frank K. Reilly, et al. *Analysis of Investments and Management of Portfolio*, 10<sup>th</sup> Edition, China Machine Press, Beijing, ISBN: 978-7-111-43864-9
2. Zvi Bodie et al. *Investments*, 10<sup>th</sup> Edition, China Machine Press, Beijing, ISBN: 978-7-111-58160-4

#### **Course Description**

This course aims to equip students with the essential knowledge and skills of analysis and valuation of fixed income securities. It covers the fundamentals of fixed income investments. Key areas include introduction to defining elements of fixed-income securities, fixed income markets, fixed income valuation, asset-backed securities, fixed income risk and return, fundamentals of credit analysis for fixed income investments.

#### **Student Learning Objectives**

After completing this course, students should be able to:

##### **Knowledge:**

- ◆ Describe characteristics of fixed income securities;
- ◆ Describe primary issuers, sectors and types of bonds;
- ◆ Explain and apply market conventions for prices/yields calculation and quotation;

- ◆ Explain Measures of risk for fixed income securities;
- ◆ Explain the risk of asset-backed securities;

#### Capability

- ◆ Calculate and interpret prices, yields and spreads of fixed-income securities;
- ◆ Calculate duration, convexity, and analyze interest rate risk;
- ◆ Discuss securitization process and related risk;
- ◆ Apply valuation models to evaluate fixed-income securities;

#### Mindset:

- ◆ Act with integrity, respect, and in an ethical manner in the finance field;
- ◆ Be independent and diligent in the investment process;
- ◆ Strive to improve professional knowledge and competence;
- ◆ Apply critical thinking in the process of decision making.

#### Website Source

1. [http:// www.sse.com.cn](http://www.sse.com.cn) Shanghai Stock Exchange
2. <http://www.szse.cn/> Shenzhen Stock Exchange
3. <https://www.hkex.com.hk/> Hong Kong Exchanges
4. <https://www.nyse.com/index> New York Stock Exchange
5. <http://www.csrc.gov.cn/pub/newsite/> 
6. <https://finance.sina.com.cn/> 

#### Teaching Methods

This course contains lectures, class discussions, homework, quizzes, presentation and exams. Textbook content will be introduced first. Then real case and practice questions will be delivered to students as a way to test their understanding of the knowledge. This will require individual or group assignment in or after class.

#### Grade Criterion

| Component     | Weight | Description   |
|---------------|--------|---|
| Final Exam    | 20%    | A cumulative final examination will be given based on all of the contents of the class. The exam paper may be composed of multiple-choice questions, short answer questions, essay questions, problems. Students should rely primarily on homework assignments to give them a sense of what they may see for material on exams. |
| Mid-Term Test | 20%    | A cumulative midterm test will be given based on all of the contents that have been taught in class. The test paper may be mainly composed of multiple-choice questions and it should be completed within 50 minutes in class.  |
| Homework      | 15%    | Most of the assigned homework is taken from the Exercises in the textbook. Assignments will be collected at the clearly stated date. Late assignments will not be accepted. The graded assignments will be kept by the tutor for reference and won't be returned to students.   |
| Quizzes       | 15%    | There will be at least 2 quizzes during the semester. Quizzes may or may not be announced in advance. It may also be used as a way to check the   |

|               |      |   |
|---------------|------|---|
|               |      | attendance. Quizzes will test your knowledge of both concepts and the application of those concepts.  |
| Presentation  | 10%  | The students will be divided into several groups to prepare a presentation. Each student is required to be involved in the presentation. The topics can be selected from the textbook or lectures or course related materials. Each group needs to finish a PPT related to the topic which is given and hand in the related resources to the teacher before the presentation. |
| Participation | 10%  | Individuals will be asked to participate individually in a question and answer at least 5 times during the semester. The performances should be counted in their participation.   |
| Attendance    | 10%  | Refer to attendance policy listed below   |
| <b>Total</b>  | 100% |   |

### Detailed Grade Computation

|               | Before Midterm | After Midterm |
|---------------|----------------|---------------|
| Attendance    | 5%             | 5%            |
| Participation | 5%             | 5%            |
| Homework      | 5%             | 10%           |
| Quizzes       | 5%             | 10%           |
| Presentation  |                | 10%           |
| Midterm test  | 20%            |               |
| Final exam    |                | 20%           |
| Total         | 40%            | 60%           |

### Grading Policy

|           |         |          |          |         |          |
|-----------|---------|----------|----------|---------|----------|
| A+ 97-100 | A 93-96 | A- 90-92 | B+ 87-89 | B 83-86 | B- 80-82 |
| C+ 75-79  | C 70-74 | C- 67-69 | D+ 63-66 | D 62-60 | F 0-59   |

### Exam Schedule

Midterm Test: Oct.31 – Nov.4, 2022

Final Exam: Jan.4- 13,2023

### Assessment of Student Performance

#### *☞ Self-Study and Reading ability Practice*

Instructor will give out the chapters or the reference books to read and use class hours to have discussion; students should be able to show a proactive attitude and ability for self-study and reading. Knowledge and oral English will be elements of homework or presentation score.

#### *☞ Homework*

Students should finish their homework by themselves. Copying from others will be treated as cheating and the homework scores will be lowered. Students should hand in all assignments on time. Late assignments will be accepted at the discretion of the instructor (i.e., when the student was ill or had an excused absence). Late assignments without reasonable proof will be reduced in score by 50%.

### *☞ Attendance*

Because the course covers a great deal of material, attending every class session is very important for performing well.

- ♦ Being late for 15 minutes or more is considered an absence.
- ♦ Five hours or above of unexcused absences will result in the lower level of the final grade by one grade band (e.g. from C – to D +). Any excused absence must be discussed directly with the teacher.
- ♦ Absence which is more than 1/3 of the total teaching hours will cause an F (a failing grade) directly.  
But students are welcome to continue attending classes.
- ♦ An incomplete grade (I) will be considered in case of medical or family emergencies.

### *☞ Participation*

- ♦ Students should participate in classes actively. Half of participation grade is determined by their presentation in class. They are encouraged to ask questions relevant to the subject and express their own opinions. Every student should respect the ideas, opinions, and questions of their classmates.
- ♦ Students should also use office hours to ask questions or talk with the instructor for good communication and effective learning.
- ♦ Frequent visiting the instructor and chatting in English during office hours is highly recommended.
- ♦ Any misbehavior and non-class related activities in class will result in the lower level of the participation grade, including ringing cell phones.
- ♦ All above behaviors will be solely evaluated by the instructor for scoring.

### *☞ Textbook*

Students must bring the textbook to class.

### **Topical Course Outline**

| Week | Date | Topics  | Homework |
|------|------|---|----------|
| 1    |      | <ul style="list-style-type: none"> <li>● <b>Syllabus</b></li> <li>● Course introduction</li> <li>● <b>Chapter 1 Introduction</b></li> <li>1 Overview of Bond Features</li> <li>2 Risks Associated with Investing in Bonds</li> </ul>  |          |
| 2    |      | <ul style="list-style-type: none"> <li>● <b>Chapter 2 Pricing of Bonds</b></li> <li>1 Pricing a Bond</li> <li>2 Price Quotes and Accrued Interest</li> <li>3 Complications</li> <li>4 Pricing Floating-Rate and Inverse-Floating-Rate Securities</li> <li>5 Price Quotes and Accrued Interest</li> <li>● <b>Chapter 3 Measuring Yield</b></li> <li>1 Computing The Yield Or Internal Rate Of Return On Any Investment</li> <li>2 Conventional Yield Measures</li> <li>3 Potential Sources Of A Bond's Dollar Return</li> <li>4 Total Return</li> <li>5 Applications Of The Total Return (Horizon Analysis)</li> </ul> |          |

|    |   |  |
|----|---|--|
| 3  | <ul style="list-style-type: none"> <li>● <b>Chapter 4 Bond Price Volatility</b></li> <li>1 The Price–Yield Relationship for Option-Free Bonds</li> <li>2 Price-Volatility Characteristics of Option-Free Bonds</li> <li>3 Measures of Bond Price Volatility</li> </ul>  |  |
| 4  | <ul style="list-style-type: none"> <li>4 Convexity</li> <li>5 Approximating a Bond’s Duration and Convexity Measure</li> </ul>  |  |
| 5  | <b>National Day Holiday</b>   |  |
| 6  | <ul style="list-style-type: none"> <li>● <b>Chapter 5 Factors Affecting Bond Yields and the Term Structure of Interest Rates</b></li> <li>1 Base Interest Rate</li> <li>2 Benchmark Spread</li> <li>3 Term Structure Of Interest Rates</li> <li>4 Swap Rate Yield Curve</li> </ul>  |  |
| 7  | <ul style="list-style-type: none"> <li>● <b>Chapter 6 Treasury and Federal Agency Securities</b></li> <li>1 Treasury Securities and Treasury Action Process</li> <li>2 Stripped Treasury Securities</li> <li>3 Federal Agency Securities</li> <li>4 China Treasury Auction Process</li> </ul>   |  |
| 8  | Comprehensive Exercise  |  |
| 9  | <ul style="list-style-type: none"> <li>● <b><u>Midterm Test</u></b></li> <li>● <b>Chapter 7 Corporate Debt Instruments</b></li> <li>1 Seniority of Debt in a Corporation’s Capital Structure</li> <li>2 Corporate Bonds</li> <li>3 Medium-Term Notes</li> <li>4 Commercial Paper</li> <li>● <b>Chapter 8 Municipal Securities</b></li> <li>1 Types and Features of Municipal Securities</li> <li>2 Floaters/Inverse Floaters</li> <li>3 Credit Risk</li> <li>4 Yields on Municipal Bonds</li> </ul>   |  |
| 10 | <ul style="list-style-type: none"> <li>● <b>Chapter 10 Residential Mortgage Loans</b></li> <li>1 Residential Mortgage Loans</li> <li>2 Types of Residential Mortgage Loans</li> <li>3 Conforming Loans</li> <li>4 Risks Associated with Investing in Mortgage Loans</li> <li>● <b>Chapter 11 Agency Mortgage Pass-Through Securities</b></li> <li>1 Sectors of the Residential Mortgage-Backed Security Market</li> <li>2 General Description Of An Agency Mortgage Pass-Through Security</li> <li>3 Issuers Of Agency Pass-Through Securities</li> <li>4 Prepayment Conventions And Cash Flow</li> <li>5 Factors Affecting Prepayments And Prepayment Modeling</li> <li>6 Cash Flow Yield</li> </ul> |  |
| 11 | <ul style="list-style-type: none"> <li>● <b>Chapter 12 Agency Collateralized Mortgage Obligations</b></li> <li>1 Agency Collateralized Mortgage Obligations</li> <li>● <b>Chapter 13 Nonagency Residential Mortgage-Backed Securities</b></li> <li>1 Collateral Types</li> <li>2 Credit Enhancement</li> </ul>  |  |
| 12 | <ul style="list-style-type: none"> <li>● <b>Chapter 14 Commercial Mortgage Loans and Commercial Mortgage-Backed Securities</b></li> <li>1 Commercial Mortgage Loans</li> <li>2 Commercial Mortgage-Backed Securities</li> </ul>   |  |

