

# THE UNIVERSITY OF HONG KONG

## HKU Business School

### FINA3323 – Fixed Income Securities

#### GENERAL INFORMATION

**Instructor:** Dr. Huiyan QIU

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Lecture: **FINA3323A** (Semester 1), time and location to be determined

**FINA3323B** (Semester 2), time and location to be determined

Pre-requisites: ECON1210 Introductory microeconomics; and FINA2322 Derivatives or STAT3905 Introduction to financial derivatives *and* FINA2320 Investments and Portfolio Analysis or STAT3609 The Statistics of Investment Risk

**Tutor:** to be determined

Course Website: MOODLE via HKU portal

#### COURSE DESCRIPTION

This course is designed to provide a comprehensive introduction to fixed income securities by covering the following broad topical areas: (a) the institutions and operations involved in the fixed income securities markets; (b) the valuation and hedging of fixed income securities; (c) the term structure of interest rate; (d) the use and application of interest rate derivatives in the areas of risk management and financial engineering; and (e) the interest rate models.

#### COURSE OBJECTIVES

1. To help students develop a solid understanding of fixed income securities and fixed income markets.
2. To provide students with concepts and methods those are heavily used in practice.

#### FACULTY LEARNING GOALS

**FLG1:** Acquisition and internalization of knowledge of the programme discipline

**FLG2:** Application and integration of knowledge

**FLG3:** Inculcating professionalism

**FLG4:** Developing global outlook

**FLG5:** Mastering communication skills

**FLG6:** Cultivating leadership

#### COURSE LEARNING OUTCOMES

Course Learning Outcomes (CLOs)	Aligned Faculty Learning Goals (FLGs)
<b>CLO1.</b> Describe and interpret the general features of fixed income securities including fixed income derivatives and understand the operations of fixed income markets.	FLG 1, 3, 5
<b>CLO2.</b> Apply techniques to price fixed income securities and be able to describe the determinants of security prices.	FLG 1, 2, 4, 5

<b>CLO3.</b> Illustrate the term structure of interest rates and basic interest rate models.	FLG 1, 2
<b>CLO4.</b> Explain the characteristics of mortgage loans and mortgage-backed securities.	FLG 1, 2
<b>CLO5.</b> Use interest rate derivatives like futures and options to manage risk and have general knowledge of other interest rate derivatives.	FLG 1, 2, 3, 5
<b>CLO6.</b> Be able to communicate with others on various issues of fixed income securities.	FLG 2, 3, 4, 5, 6

### COURSE TEACHING AND LEARNING ACTIVITIES

Course Teaching and Learning Activities	Expected study hour	Study Load (% of study)
T&L1. Lectures	36 hours	28.6%
T&L2. Assignments	20 hours	15.9%
T&L3. Tutorials	10 hours	7.9%
T&L4. Self-study	60 hours	47.6%
Total	126 hours	100%

Assessment Methods	Weights	Aligned Course Learning Outcomes
A1. In-Class and Tutorial Performance	5%	CLO 1, 2, 3, 4, 5, 6
A2. Assignments	20%	CLO 1, 2, 3, 4, 5, 6
A3. Mid-term Examination	25%	CLO 1, 2, 3
A4. Final Examination	50%	CLO 1, 2, 3, 4, 5, 6
Total	100%	

**Coursework / Examination Ratio:** 25 % / 75 %

### STANDARDS FOR ASSESSMENT

#### Course Grade Descriptors

A+, A, A-	Exhibited high level of understanding of the course materials through excellent performance in class discussion, assignments and term tests.
B+, B, B-	Exhibited reasonably high level of understanding of the course materials through good performance in class discussion, assignments, and term tests.
C+, C, C-	Exhibited fair level of understanding of the course materials.
D+, D	Exhibited limited level of understanding of the course materials.
F	Exhibited low level of understanding of the course materials.

#### Assessment Rubrics for Each Assessment

##### A1 In-Class and Tutorial Performance

A+ A A-	B+ B B-	C+ C C-	D+ D	F
Extremely well prepared for class discussion, very	Partially prepared for class discussion, quite	Not well prepared for class discussion, limited	Not well prepared for class discussion, no	Poorly prepared for class discussion and no

active in sharing views and attended almost all lectures and tutorials.	active in sharing views and attended most of the lectures and tutorials	active in sharing views and attended many of the lectures and tutorials.	sharing of views and attended some of the lectures and tutorials	sharing of views and experience and rarely attended lectures and tutorials.
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**A2 Assignments: for numerical questions/homework, please refer to the following table:**

A+ A A-	B+ B B-	C+ C C-	D+ D	F
Submitted all homework with excellent accuracy.	Submitted well written homework with good accuracy.	Submitted homework with fair level accuracy.	Submitted homework with limited accuracy.	Poorly written homework or no submission.

**A2 Assignments: for essay type problems, please refer to the following grading criteria:**

Grade	Depth and breadth of Coverage, critical elements, structure, language and conventions
A+,A, A-	<p>All aspects were addressed and researched in great depth.</p> <p>Demonstrated a clear understanding of and the ability to apply the theory, concepts and issues relating to the topic.</p> <p>Clearly identified the most critical aspects of the task and adopted a critical perspective.</p> <p>Developed excellent argument and offered a logically consistent and well-articulated analysis and insight into the subject.</p> <p>Drew widely from the academic literature and elsewhere whilst maintaining relevance.</p> <p>All aspects conformed to a high academic / professional standard.</p>
B+, B, B-	<p>Most aspects were addressed and researched in depth.</p> <p>Demonstrated a good understanding and some application of the theory and issues relating to the topic.</p> <p>Identified critical aspects of the task and adopted a critical perspective.</p> <p>Showed some evidence of analysis, supported by logical argument and insight into the subject.</p> <p>Drew on relevant academic and other material.</p> <p>Most aspects conformed to a high academic / professional standard.</p>
C+, C, C-	<p>Most aspects were addressed and researched adequately.</p> <p>Demonstrated a good understanding of the theory, concepts and issues relating to the topic but limited application relating to the topic.</p> <p>Some presented argument showed some insight but not always consistent and logical.</p> <p>Drew upon an adequate range of academic and other material.</p> <p>Most aspects conformed to an acceptable academic / professional standard.</p>
D+, D	<p>Basic aspects were addressed and researched adequately. Demonstrated mainly description, showing basic understanding of the topic but no application.</p> <p>Showed little evidence of analysis but no clear and logical argument relating to the subject.</p> <p>Drew primarily upon course materials.</p> <p>Limited aspects conformed to academic / professional standards.</p>

F	Basic aspects were superficial, inadequate or absent. Demonstrated limited understanding of the topic and drew conclusions unrelated to the topic. The written work was not of an academic / professional standard.
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**A3 and A4 Midterm and Final Exam**

Midterm and final exam may include three types of questions: multiple choice, calculation problems, and essay questions. Multiple choice and calculation problems are graded according to the marks assigned to each question. Essay questions are graded according to the following criteria:

A+ A A-	B+ B B-	C+ C C-	D+ D	F
Idea development is insightful and sophisticated; Supporting evidence is convincing, accurate and detailed. Well written with clear focus.	Idea development is clear and thoughtful; Supporting evidence is sufficient and accurate. Well written.	Idea development is simplistic and lacking in relevance; Supporting evidence insufficient but accurate. Somewhat well written.	Idea development is superficial and ineffective; Supporting evidence is insufficient and inaccurate. Writing is unclear.	Idea development is absent; Supporting evidence is vague or missing. Poorly written.

**COURSE CONTENT AND TENTATIVE TEACHING SCHEDULE**

The following topics will be covered:

- Introduction to Fixed Income Securities
- Bond Valuation and Yield Measures
- Bond Price Volatility
- Bond Yield and Interest Rate Structure
- Bonds with Other Features
- Forward and Futures on Bonds
- Options and Credit Derivatives
- Bond Portfolio Management including Hedging
- Interest Rate Models
- Mortgages and Mortgage-Backed Securities

Roughly, one three-hour long session will be used to cover one topic. More detailed teaching schedule will be provided in each semester when the course is offered.

**REQUIRED/RECOMMENDED READINGS & ONLINE MATERIALS**

1. **Highly recommended textbook:** Fabozzi, Frank J., *Bond Markets, Analysis, and Strategies*, Global Edition, 8<sup>th</sup> Edition, 2012, (Pearson Education, Inc)
2. **Reference book:** Tuckman, Bruce and Angel Serrat, *Fixed Income Securities: Tools for Today’s Markets*, University Edition, 3<sup>rd</sup> Edition, 2012, (Wiley Finance)
3. **Lecture notes prepared by the instructor, which will be available on course Moodle**

- 4. **Video clips on Youtube**
- 5. **Recommended reading articles**

### **MEANS/PROCESSES FOR STUDENT FEEDBACK ON COURSE**

- Conducting the Student Evaluation of Teaching and Learning (SETL) around the end of the semester
- Using Discussion Forum in the course Moodle to seek for students' feedback throughout the semester

### **COURSE POLICY**

#### **Class Conduct**

Students are required to attend all classes on time. If you miss a class, it is entirely your responsibility for what you have missed. In case you have to leave the class early, please inform the instructor beforehand and leave quietly.

No use of mobile phone or chatting is allowed when the class is in session. Remember to turn off or mute the phone before each session. The instructor has the discretion to give penalty in case of class misconduct.

Respect your instructors and your fellow students. Be considerate to others.

#### **Academic Dishonesty**

The University Regulations on academic dishonesty will be strictly enforced! Please check the University Statement on plagiarism on the web: <http://www.hku.hk/plagiarism/>

Academic dishonesty is any act that misrepresents a person's own academic work or that compromises the academic work of another. It includes (but not limited to) cheating on assignments or examinations; plagiarizing, i.e., representing someone else's ideas as if they are one's own; sabotaging another's work.

If you are caught in an act of academic dishonesty or misconduct, you will receive an "F" grade for the subject. The relevant Board of Examiners may impose other penalty in relation to the seriousness of the offense.

### **ADDITIONAL COURSE INFORMATION**

- Announcements, assignments, and lecture slides will be posted on the course MOODLE website. Hard copy of lecture notes will not be provided.
- No late assignments will be accepted.
- Additional course information like TA's information, class schedule and such will be available later.