

## Tamkang University Academic Year 110, 2nd Semester Course Syllabus

Course Title	THE MATHEMATICS OF FINANCE	Instructor	CHEN, TZU-YING
Course Class	TLOXB2P DEPARTMENT OF RISK MANAGEMENT AND INSURANCE, 2P	Details	<ul style="list-style-type: none"> <li>◆ General Course</li> <li>◆ Selective</li> <li>◆ One Semester</li> </ul>
Relevance to SDGs	SDG4 Quality education		
<b>Departmental Aim of Education</b>			
<ul style="list-style-type: none"> <li>I. Enhance professional knowledge of risk management and insurance to strengthen professional skill.</li> <li>II. Focus on industry-university cooperation to combine theory and practical issues.</li> <li>III. Emphasize on the license acquirement to increase students' job opportunity.</li> </ul>			
<b>Subject Departmental core competences</b>			
<ul style="list-style-type: none"> <li>A. Students will exhibit knowledge for business professional.(ratio:50.00)</li> <li>D. Students will exhibit the ability of financial planning especially for insurance products. (ratio:50.00)</li> </ul>			
<b>Subject Schoolwide essential virtues</b>			
<ul style="list-style-type: none"> <li>2. Information literacy. (ratio:50.00)</li> <li>5. Independent thinking. (ratio:50.00)</li> </ul>			
<b>Course Introduction</b>	The aim of this course is to give a general understanding of the principles of mathematical finance.		

**The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.**

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

II. Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

III. Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	To understand the fundamental concepts of mathematical finance.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	AD	25	Lecture	Testing, Study Assignments

**Course Schedule**

Week	Date	Course Contents	Note
1	111/02/21 ~ 111/02/25	Introduction	
2	111/02/28 ~ 111/03/04	Ch 1 The Measurement of Interest	
3	111/03/07 ~ 111/03/11	Ch 1 The Measurement of Interest	
4	111/03/14 ~ 111/03/18	Ch 1 The Measurement of Interest	
5	111/03/21 ~ 111/03/25	Ch 2 Solution of Problems in Interest	
6	111/03/28 ~ 111/04/01	Ch 2 Solution of Problems in Interest	
7	111/04/04 ~ 111/04/08	Teaching Observation Period	
8	111/04/11 ~ 111/04/15	Ch 3 Basic Annuities	
9	111/04/18 ~ 111/04/22	Review for Midterm Exam	
10	111/04/25 ~ 111/04/29	Midterm Exam Week	
11	111/05/02 ~ 111/05/06	Ch 4 More General Annuities	
12	111/05/09 ~ 111/05/13	Ch 4 More General Annuities	
13	111/05/16 ~ 111/05/20	Ch 5 Amortization Schedules and Sinking Funds	

14	111/05/23~ 111/05/27	Ch 5 Amortization Schedules and Sinking Funds	
15	111/05/30~ 111/06/03	National Holiday (No Class)	
16	111/06/06~ 111/06/10	Ch 6 Bond and Other Securities	
17	111/06/13~ 111/06/17	Review for Final Exam	
18	111/06/20~ 111/06/24	Final Exam Week	
Requirement			
Teaching Facility	Computer, Projector		
Textbooks and Teaching Materials	Stephen Kellison. The Theory of Interest, 3rd Edition, 2009.		
References	<p>利息導論與應用 ( 3版 ) ; 喬治華、莊聲和、李志武編譯 ; Stephen Kellison原著 ; 滄海圖書出版。</p> <p>財務數學 ( 8版 ) ; 黃弘毅編譯 ; Robert L. Brown, Steve Kopp, and Peter Zima原著 ; 華泰書局出版。</p>		
Number of Assignment(s)	4 (Filled in by assignment instructor only)		
Grading Policy	<p>◆ Attendance :            %    ◆ Mark of Usual : 20.0 %    ◆ Midterm Exam : 40.0 %</p> <p>◆ Final Exam :    40.0 %</p> <p>◆ Other (    ) :            %</p>		
Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="http://info.ais.tku.edu.tw/csp">http://info.ais.tku.edu.tw/csp</a> or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a> .</p> <p><b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b></p>		