

**COURSE OUTLINE: BR2208 Foundation of Risk Management**

<b>Academic Year</b>	2022/2023	<b>Semester</b>	1
<b>Course Coordinator</b>	Shinichi Kamiya		
<b>Course Code</b>	BR2208		
<b>Course Title</b>	Foundation of Risk Management		
<b>Pre-requisites</b>	Nil		
<b>No of AUs</b>	3		
<b>Contact Hours</b>	3 x 13 weeks = 39		
<b>Proposal Date</b>	14 March 2022		
<b>Seminar Hours</b>	Tuesday 930am-030pm		

**A) Course Aims**

This course is designed for students who have interest in careers in the financial risk management / analytics functions of financial institutions and corporations or in the risk management consulting services. The purpose of the course is to equip students with right mindsets and necessary knowledge and skillsets of completing *Foundations of Risk Management* in the GARP FRM® Exam Part I.

**B) Intended Learning Outcomes (ILO)/Objectives**

By the end of this course, you should be able to:

1. Explain the building blocks of risk management.
2. Explain how firms manage financial risk.
3. Discuss the governance of risk management
4. Describe credit risk transfer mechanisms
5. Use the Modern Portfolio Theory and the Capital Asset Pricing Model
6. Model returns using the Arbitrage Pricing Theory and multifactor models
7. Aggregate and report risk data in a proper manner
8. Explain the concept of enterprise risk management and future trends
9. Analyse past financial disasters including the Great Financial Crisis of 2007-2009

**C) Course Content**

- Basic risk types, measurement and management tools
- Creating value with risk management
- Risk governance and corporate governance
- Credit risk transfer mechanisms
- The Capital Asset Pricing Model (CAPM)
- Risk-adjusted performance measurement
- Multifactor models
- Data aggregation and risk reporting
- Financial disasters and risk management failures

**D) Assessment (includes both continuous and summative assessment)**

Component	ILO Tested	NBS Learning Goal (Refer to Appendix 1 for list)	Weight	Team/Individual	Assessment Rubrics (attach rubrics in Annex)
Group assignments	ILO1-9	<ul style="list-style-type: none"> <li>• Problem Solving &amp; Decision Making</li> <li>• Teamwork and Interpersonal Skills</li> </ul>	40%	Group 40% (See #1 for evaluation)	<ul style="list-style-type: none"> <li>• Problem Solving &amp; Decision Making</li> <li>• Teamwork and Interpersonal Skills</li> </ul>
Case Studies	ILO1-3, 8	Oral communication	30%	Group presentation (each member must present; See #1 for evaluation)	Oral Communication
Midterm Quiz	ILO1-9	Acquisition of knowledge	20%	Individual	Acquisition of knowledge
Class participation	ILO1-9	Oral communication	10%	Individual	Class Participation
Total			100%		

#1. When you find that equal contribution with your group member is difficult, please immediately consult with the instructor to resolve the issue. If it fails to solve the issue, confidential peer evaluation is requested to submit individually to the instructor. The peer evaluation form and assessment rubrics is available at Annex 1. You are requested to be familiar with mark adjustment policy for unequal contributions among members.

**E) Formative feedback**

Feedback is central to this course. You will receive feedback from me about your coursework: assignments and project.

**F) Learning and Teaching approach**

Approach	How does this approach support you in achieving the learning outcomes?
Seminars	The interactive seminar session where there are ample opportunities for open discussion on the conceptual questions raised in the class allows you to think critical and share your ideas and concept with the class. This ensures that the targeted learning outcomes are being achieved
Group assignments	The assignments require you to generate, analyze and deliver outputs in a guided manner.
Case studies	Case studies require you to summarize your findings, prepare for your presentation, and make arguments.
Other In-Class activities	Some learning outcomes for this course are skills which are practical in nature and cannot be achieved by reading and writing. The achievement of such learning outcomes requires hands-on experience, in-class activities provide such opportunities.

**G) Reading and References**

- Handouts
- “Data Breach at Equifax” Harvard Business School Case 9-118-031
- “J.P. Morgan Private Bank: Risk Management during the Financial Crisis 2008-2009” Harvard Business School Case 9-311-003

**H) Course Policies and Student Responsibilities****(1) General**

You are expected to complete all assigned pre-class readings and activities, attend all seminar classes punctually and take all scheduled assignments and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements for seminar sessions they have missed. You are expected to participate in all seminar discussions and activities.

**(2) Absenteeism**

Absence from class without a valid reason will affect your overall course grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU’s approved activities supported by an excuse letter from the relevant bodies. If you miss a lecture, you must inform the course instructor via email prior to the start of the class.

**(3) No Food**

You are not allowed to bring food in the classroom. You may have a meal during breaks.

**I) Academic Integrity**

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU’s shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the [academic integrity website](#) for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

**J) Course Instructors**

Instructor	Office Location	Phone	Email	Consultation Hours
Shinichi Kamiya	S3-B1B-64	67905718	skamiya@ntu.edu.sg	By prior appointment via email

**K) Planned Weekly Schedule**

<b>Week</b>	<b>Topic</b>	<b>ILO</b>	<b>Readings/ Activities</b>
1 <b>Online</b> (9/8/2022)	Economics of Risk Management	ILO1	Handout
2 (16/8/2022)	The Building Blocks of Risk Management	ILO1	Handout
3 (23/8/2022)	How Do Firms Manage Financial Risk?	ILO2	Handout; <b>group assignment</b>
4 (30/8/2022)	How Do Firms Manage Financial Risk?	ILO2	Handout
5 (6/9/2022)	The Governance of Risk Management	ILO3	Handout; <b>Equifax case</b>
6 (13/9/2022)	Credit Risk Transfer Mechanisms	ILO4	Handout
7 (20/9/2022)	Modern Portfolio Theory (MPT) and the Capital Asset Pricing Model (CAPM)	ILO5	Handout; <b>group assignment</b>
(27/9/2022)	Recess		
8 (4/10/2022)	The Arbitrage Pricing Theory and Multifactor Models of Risk and Return	ILO6	Handout
9 (11/10/2022)	Principles for Effective Data Aggregation and Risk Reporting	ILO7	Handout
10 (18/10/2022)	Enterprise Risk Management and Future Trends	ILO8	Handout; <b>group assignment</b>
11 (25/10/2022)	Learning from Financial Disasters	ILO9	Handout
12 (1/11/2022)	Anatomy of the Great Financial Crisis	ILO9	Handout; <b>J.P. Morgan case</b>
13 (8/11/2022)	<b>Mid-term Quiz / Review</b>		

## **ANNEX A: ASSESSMENT CRITERIA COMMON FOR GROUP ASSIGNMENTS AND CASE STUDIES**

### **Peer Evaluation Instructions**

All members are required to complete a peer evaluation for each member of the team (i.e., including a self-assessment). The completed peer evaluation form must be submitted individually to the instructor immediately after the team project has been submitted for grading. Identity of appraisers will be kept **confidential** and will not be revealed to other team members.

We will use a member's ratings (on a scale ranging from 1 to 7) to award marks for the team project to other members by computing the average rating that a member receives from other members (i.e., excluding each member's self-rating). Each member will be informed of his/her average rating. A member's mark for the team project will be computed as follows:

1. If a member's average rating is  $\geq 4$ , the member will receive **100%** of the overall mark awarded to the team project.
2. If a member's average rating is  $< 4$  but  $\geq 3$ , the member will receive **80%** of the overall mark awarded to the team project.
3. If a member's average rating is  $< 3$  but  $\geq 2$ , the member will receive **50%** of the overall mark awarded to the team project.
4. If a member's average rating is  $< 2$ , the member will receive **30%** of the overall mark awarded to the team project.

*A member who has concerns with the ratings given by other team members and/or his/her average rating should immediately consult his/her instructor upon receiving his/her peer evaluation feedback.*

**CONFIDENTIAL PEER EVALUATION FORM FOR TEAM PROJECT**

Member's name:	
Seminar group and team number:	

Please use the attached Peer Evaluation Rubric to evaluate yourself and your team members on each of the 5 stated attributes (on a scale of 1 to 7). State your ratings for yourself and each of your team members in the table below. For your self-assessment, insert "(Self)" after your name in the table below.

Index #	Name of team members	1 - RR	2 - CM	3 - CR	4 - CT	5 - RS	Average Rating
1							
2							
3							
4							
5							
6							

If any of your ratings above is < 4, please provide a brief explanation to justify the ratings.

Index #	Brief explanation to justify a rating of < 4

*You may attach supporting documents (like emails and screen shots), if any, to support your explanations above.*

**Teamwork & Interpersonal Skills (Peer Evaluation) Rubric****Learning Objective: The ability to work effectively with others in a group setting.**

Traits	Performance	
<b>1. Roles and Responsibility (RR)</b> Behaves professionally by upholding responsibility and assuming accountability for self and others in progressing towards the team's goal.	<b>Scant</b> Unclear about his/her own role; refuses to take a role in the group; insists to work individually and has limited coordination or communication with others.	<b>Substantially Developed</b> Always fulfills responsibilities; performs his/her role within the group with enthusiasm and demonstrates willingness to work collaboratively.
<b>Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed</b>		
<b>2. Communication (CM)</b> Identifies appropriate mechanisms to coordinate and correspond with team members.	<b>Scant</b> Modes of communication are not appropriate, causing confusion and miscommunication among team members.	<b>Substantially Developed</b> Modes of communication are appropriate, and maintaining timely communication and correspondence with team members.
<b>Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed</b>		
<b>3. Conflict Resolution (CR)</b> Resolves conflicts using a variety of approaches.	<b>Scant</b> Does not recognize conflicts or is unwilling to resolve conflicts.	<b>Substantially Developed</b> Consistently resolves conflicts through facilitating open discussion and compromise.
<b>Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed</b>		
<b>4. Contributions (CT)</b> Contributes positive input for the team; effectively utilizes one's knowledge and expertise.	<b>Scant</b> Largely disinterested in working in a group and refuses to participate; observes passively or is unwilling to share information with other team members.	<b>Substantially Developed</b> <u>Actively attends and participates in all activities and provides meaningful contribution in articulating ideas and opinions.</u>
<b>Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed</b>		
<b>5. Relationship (RS)</b> Maintains cooperative interaction with other team members regardless of individual /cultural differences and respects diverse perspectives.	<b>Scant</b> Rarely listens to others and does not acknowledge the opinions that differ from his/her own.	<b>Substantially Developed</b> Engages in respectful relationships with all other members in the team. Embraces and accepts diverse points of view without prejudice.
<b>Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed</b>		

**References:**

*Teamwork Value Rubric - Association of American Colleges and Universities.* Retrieved from <http://www.aacu.org/value/rubrics/pdf/teamwork.pdf>

**ANNEX B: ASSESSMENT CRITERIA FOR MIDTERM QUIZ**

Learning Goal	Course Learning Objective	Assessment Method
Acquiring knowledge	The ability to demonstrate understanding of the various techniques introduced in the module. Effectiveness is measured by the clarity of the solutions and workings provided.	Midterm Quiz

Traits	<5 Below Expectation	6 Met Expectation	>6 Above Expectation
ILO 1. Explain the building blocks of risk management.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 2. Explain how firms manage financial risk.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 3. Discuss the governance of risk management.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 4. Describe credit risk transfer mechanisms	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 5. Use the Modern Portfolio Theory and the Capital Asset Pricing Model.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 6. Model returns using the Arbitrage Pricing Theory and multifactor models.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 7. Aggregate and report risk data in a proper manner.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 8. Explain the concept of enterprise risk management and future trends.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.
ILO 9. Analyse past financial disasters including the Great Financial Crisis of 2007-2009.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives. Has a framework for problem solving and analysis.	Successfully obtain answers quickly even for complex problems that require several steps.



**ANNEX C: ASSESSMENT CRITERIA FOR GROUP ASSIGNMENT**

Learning Goal	Course Learning Objective	Assessment Method
Problem Solving & Decision Making	Develop problem solving skills using concepts and appropriate methods, to analyse and evaluate alternative solutions and make appropriate recommendations.	Group Assignment

Traits	<5 Below Expectation	6 Met Expectation	>6 Above Expectation
Is able to perform core elements of a risk management process. (Risk identification, assessment, measurement, and management)	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives.	Successfully obtain answers quickly even for complex problems that require several steps.
Is able to evaluate risk and return of a portfolio.	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives.	Successfully obtain answers quickly even for complex problems that require several steps.
Is able to discuss the benefits of implementing ERM	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives.	Successfully obtain answers quickly even for complex problems that require several steps.
Is able to identify corporate governance requirements related to risk oversight	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives.	Successfully obtain answers quickly even for complex problems that require several steps.
Is able to evaluate the role of internal control for risk management	Misunderstand the question or miss out significant parts of the calculations required	Achieves most of the learning objectives.	Successfully obtain answers quickly even for complex problems that require several steps.

**ANNEX D: ASSESSMENT CRITERIA FOR CASE STUDIES**

Learning Goal	Course Learning Objective	Assessment Method
Oral Communication	The ability to communicate well with others in writing so that it clearly expresses the intended message and is understandable and useful to the receiving party.	Assignments

Traits	<5 Below Expectation	6 Met Expectation	>6 Above Expectation
Communication Outcome <ul style="list-style-type: none"> <li>Has a clear message for audience</li> <li>Maximizes likelihood of audience accepting the message</li> </ul>	Central message is not explicitly stated in the presentation. Main points are not clearly identified, audience unsure of the direction of the message.	Achieves most of the learning objectives.	Central message is precisely stated; main points are clearly identified.
Situational Factors <ul style="list-style-type: none"> <li>Addresses audience needs</li> <li>Builds rapport with audience</li> </ul>	Topic is irrelevant to audience needs and interest. No attempt made to connect topic to audience.	Achieves most of the learning objectives.	Connection of topic to audience needs and interest is stated with sophistication. Identifies and expresses a deep understanding of the target audience.
Design Factors <b>Content</b> <ul style="list-style-type: none"> <li>Presents relevant information</li> <li>Supports main points with strong evidence</li> </ul>	Content is erroneous or irrelevant; references and supporting materials are absent. Lacks of depth in content and little insights are exhibited. Presentation falls outside set time parameters.	Achieves most of the learning objectives.	Content is accurate, thorough, and directly on point; strong support and references are provided. Exhibits depth and insight in content. Effective use of time and stays within time parameters.
Design Factors <b>Structure</b> <ul style="list-style-type: none"> <li>Organises content coherently</li> <li>Signals transitions between points</li> </ul>	Organizational pattern (specific introduction and conclusion, sequenced materials within the body, and transitions) is not observable.	Achieves most of the learning objectives.	Organizational pattern is clearly and consistently observable and makes the content of the presentation cohesive.
Design Factors <b>Verbal</b> <ul style="list-style-type: none"> <li>Speaks at appropriate speed and volume</li> <li>Uses correct grammar and pronunciation</li> </ul>	Grammar, pronunciation and word choice are deficient. Vocal delivery is too soft or too fast to understand; gap-fillers interfere with expression.	Achieves most of the learning objectives.	Free of errors in grammar and pronunciation; good choices of word enhance clarity of expression. Vocal delivery is varied and dynamic. Speech rate, volume, and tone facilitate audience comprehension. Minimal gap fillers.
Design Factors <b>Non-Verbal</b> <ul style="list-style-type: none"> <li>Establishes eye contact</li> <li>Uses gestures and movement to convey energy and confidence</li> </ul>	Eye contact, posture, gestures, movement and facial expressions are inappropriate and significantly distracting.	Achieves most of the learning objectives.	Eye contact, posture, gestures, movement and facial expressions make the presentation compelling, and speaker appears polished and confident.

**ANNEX E: ASSESSMENT CRITERIA FOR CLASS PARTICIPATION**

Traits	Performance		
	<5 Below Expectation	6 Met Expectation	>6 Above Expectation
<b>Contribution quality</b>	No contributions/ Contributions lack substance	Contributions demonstrate knowledge of subject matter	Contributions are constructive and insightful
<b>Contribution frequency</b>	Does not speak up / contribute in class	Occasionally speaks up/contributes in class	Speaks up/contributes in all classes