NANYANG TECHNOLOGICAL UNIVERSITY
NANYANG BUSINESS SCHOOL
BA2201
ACTURIAL ECONOMICS

Academic Year	:	2023/2024	**Semester** :	2
Course Coordinator	:	Shinichi Kamiya		
Pre-requisites	:	AB0901 or HE9091		
No. of AUs	:	4		
Contact Hours	:	52 hours		

A) Course Aims/Description

The aim of this course is to introduce students major in actuarial science to the core economic principles and how these can be used in a business environment to help decision making and behavior. It provides microeconomic and macroeconomic foundations, both from the point of view of individuals and firms, particularly focusing on topics covered by the IFoA Subject CB2 Business Economics. Actuarial science students who perform well in this seminar will earn exam exemption for Subject CB2.

B) Intended Learning Outcomes (ILO)/Objectives

On successful completion of this course the student will be able to:

ILO 1.   Discuss consumer demand and behavior.
ILO 2.   Evaluate a firm's decision on product selection.
ILO 3.   Describe profit maximisation under perfect/imperfect competition and monopoly.
ILO 4.   Explain how a firm's price and output decisions are made.
ILO 5.   Understand various pricing strategies that firms can adopt.
ILO 6.   Explain the reasons for government intervention for environmental problems.
ILO 7.   Understand macroeconomic issues and ideas.
ILO 8.   Apply macroeconomic models and theories.
ILO 9.   Identify the role of money and interest rates in the economy.
ILO 10. Describe the relation between investment, unemployment, inflation, and output.
ILO 11. Explain how macroeconomic policies impact on businesses.

C) Course Content

- Foundations of microeconomics: demand-supply
- Demand: Utility theory, indifference analysis
- Supply: Production theory, profit maximization, and markets
- Microeconomic policy: Inequality, income redistribution, markets, efficiency
- Environmental policy
- Foundations of macroeconomics: The national economy, issues
- Macroeconomics: Market equilibrium, money and interest rates, fiscal and monetary policy, aggregate supply, unemployment and inflation, supply-side policies

D) Assessment (includes both continuous and summative assessment)

Component	ILO Tested	NBS Learning Goal	Weightage	# Team/Individual	Assessment Rubrics
1. Final Examination	ILO1-ILO11	Acquisition of knowledge, Problem Solving & Decision Making	70%	Individual	N.A
2. Insurance Market Simulation	ILO1-ILO4	Problem Solving & Decision Making	10%	Group (See Annex A(i) for the instruction and Annex B1 for peer evaluation)	Problem Solving and Decision Making (Annex B2); Teamwork & Interpersonal Skills (Annex B1)
3. Case Studies (Presentation, Discussion)	ILO1-ILO11	Oral Communication	10%	Team presentation (See Annex A(ii) for the instruction and Annex B1 for peer evaluation)	Oral Communication (Annex B4); Teamwork and Interpersonal Skills (Annex B1)
4. Class Participation in Case Studies	ILO1-ILO11	Oral Communication	10%	Individual	Oral Communication (Annex B3)
Total			100%		

E) Formative feedback

Feedback is central to this course. You will receive both written and verbal feedback from me about your presentations.

F) Learning and Teaching approach

Approach	How does this approach support you in achieving the learning outcomes?
Seminars	The interactive seminars where there are ample opportunities for open discussion on the conceptual questions raised in the class allows you to think critically and share their ideas and concept with the class, which ensure that the targeted learning outcomes are being achieved.
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, and in-class activities provide such opportunities.

G) Reading and References

- Textbook: Economics. 7th ed. John Sloman, Dean Garratt, Jon Guest, 2018. ISBN:978-1292187853.
- Institute and Faculty of Actuaries, Exam Syllabus for "CB2 Business Economics"

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.

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	ABS-06-47	6970-5718	skamiya@ntu.edu.sg	By prior appointment

K) Planned Weekly Schedule

Week	Topic	ILO	Readings/ Activities
1 (13 Jan)	Foundations of microeconomics	ILO1-2	SGG Ch. 1-3
2 (20 Jan)	Consumer demand and behavior	ILO1-2	SGG Ch. 4
3 (27 Jan)	Supply	ILO2-3	SGG Ch. 6 / W3 Case study
4 (3 Feb)	Profit maximization	ILO3-4	SGG Ch. 7 / W4 Case study
5 (10 Feb)	Profit maximization, firm behavior	ILO5	SGG Ch. 8-9 / W5 Case study
6 (17 Feb)	Environmental Policy	ILO6	SGG Ch. 12-13 / W6 Case study
7 (24 Feb)	Insurance market simulation Foundation of macroeconomics	ILO1-5	Simulation SGG Ch. 15-16
(3 Mar)	*Recess*		
8 (10 Mar)	Macroeconomic equilibrium	ILO7	SGG Ch. 17 / W8 Case study
9 (17 Mar)	Money and interest rate	ILO8-9	SGG Ch. 18 / /W9 Case study
10 (24 Mar)	Money and Goods Markets	ILO10	SGG Ch. 19 / W10 Case study
11 (31 Mar)	Supply, inflation, unemployment	ILO10	SGG Ch. 20-21 / W11 Case study
12 (7 Apr) *Good Friday*	Fiscal and monetary policy, supply-side policies	ILO11	SGG Ch. 22-23
13 (14 Apr)	Review		

Insurance Market Simulation Market

(subject to change)

Overview:
- The market consists of about 8 insurers. The objective of insurers is maximizing surplus.
- Three lines of business: auto insurance, corporate liability insurance, catastrophe insurance.
- Each insurer is endowed with $300M as its initial capital (C_0).

Premium Offer and Market Share
- Insurers get market share (M) of each line according to their premium offer (P):

Bid Result (P)	Lowest	2nd	3rd	4th	5th	6th	7th	8th	8th or higher
Market Share (M)	25%	20%	20%	15%	15%	5%	0%	0%	0%

- Lines of business are characterized by their aggregate losses (S) distributions:
  - Auto insurance: Normally distributed with mean=10B and sigma=0.3B ($9.7B<S<\infty$)
  - Liability insurance: Normally distributed with mean=5B and sigma=1B ($4B<S<\infty$)
  - Catastrophe insurance: Normally distributed with mean=2B and sigma=3B ($1B<S<\infty$)
- Aggregate losses are realized at the end of each period.

Catastrophe Stop-loss Reinsurance:
- Stop-loss reinsurance for catastrophe insurance can be purchased after market shares are determined but before claim is realized. Stop-loss reinsurance purchase percentage (K) must be determined.
- If you got a market share of catastrophe insurance, you <u>MUST</u> purchase reinsurance for at least 50% of the share (K=0.5).
  - Reinsurance premium is 0.2B times coverage (i.e., $0.2B*M*K$)
  - Reinsurance covers aggregate losses that exceeds $\mu+\sigma$. (i.e., $M*K*max[0, (S-5B)]$). $R=M*K*(S-5B)$ if S>5B; R=0 otherwise

Investment:
- Insurers must invest their capital and net premium on either risk-free asset or risky asset (P%).
  - Insurers cannot invest in stock by more than 50%.
- Those investment vehicles are characterized by:
  - Risk-free bond which provides 3% one period rate of return
  - Stock which provides a uncertain rate of return normally distributed with mean=6% and sigma=6%

Process:
1. Insurers determine their premium offer (P) corresponding to the aggregate claim (S) for each line they want to offer. The premium is insurer's private information: Don't tell your premium to other insurers.
2. Pass your premium offer to operator.
3. Market share (M) for each business is determined and is publicly announced.
4. Based on the market share, insurers are asked to determine both the percentage of reinsurance purchase for each line and investment portfolio.
5. Privately report the reinsurance percentage (K) and investment portfolio (P%) to operator.
6. Random number are seeded and the rate of return on stock (r) and aggregate losses (S) are

determined.

7. Calculate and report remained capital at the end of period and review the performance.
8. Submit profit calculation sheet to the regulator for review.
9. Repeat this process until we run out of time.
10. Maintain the accuracy of your calculation in million.

Regulation:
- The minimum premium insurers can offer is 90% of the mean of aggregate losses (ie., 9B for Auto, 4.5B for Liability, and 1.8B for Cat).
- Any violation of the rule causes penalty
- No bailout will be implemented when insurer's capital is exhausted.

Evaluation:
- Insurers are evaluated according to the capital remained at the end of the game.

Result	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	Bankruptcy
Quiz Mark	10	9	8.5	8	7.5	7	6	5	5	3

- Operators and regulators are endowed with 8 marks. Their marks will be adjusted by their performance.
- Your individual marks could be different from your team marks. Your marks depend on your contribution to your team, determined by peer evaluation.

Annex A (ii)

Group Case Research Study Presentation (15 min; 1 or 2 presentations per week)

i) The objectives of the team case study are 1) for presenters to teach key topics of a textbook chapter by using real cases in Singapore or APAC context and 2) for audience to learn the textbook chapter effectively.

ii) Your group presentation will be evaluated by its content and the quality of the presentation. The effectiveness of the case studies in learning the week's topic will be the key component of the evaluation.

iii) Each member must present at least 4 minutes.

iv) The instructor and audience (classmates) will evaluate your presentation. Both evaluations are equally weighted.

v) Pick Asia-based companies (e.g. Shoppee, BreadTalk, Osim, SIA, Keppel and others) in microeconomic presentations. For macroeconomic presentations, pick Singapore government and other governments.

ANNEX B: ASSESSMENT CRITERIA

Sample Peer Evaluation Used in an Undergraduate Course

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 ≥ 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 ≥ 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 ≥ 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.

Annex B1: Teamwork & Interpersonal Skills (Peer Evaluation) Rubric
Learning Objective: The ability to work effectively with others in a group setting.

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

References:

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

Annex B2: Insurance Market Simulation Rubric

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.	Insurance market simulation

Traits	1-5 Below Expectation	6 Met Expectation	6-10 Above Expectation
Understand the nature of insurance market and make proper decisions	Misunderstand the question or miss out significant parts of the analyses 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.
Understand and follow the insurance regulations	Misunderstand the question or miss out significant parts of the analyses 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 B3: Class Participation Rubric

Traits	Performance		
	1-5 Below Expectation	6 Met Expectation	6-10 Above Expectation
Contribution quality: Verbal demonstration of own workings for assigned exercise questions	Lack of clear and concise explanation of own workings	Sufficient explanation of own workings	Clear and concise explanation of workings that helps other students' understanding
Contribution quality: Quantitative demonstration of own workings for assigned exercise questions	No contributions/ Contributions lack substance	Sufficiently demonstrate knowledge of subject matter	Clear understanding of subject matter that helps other students' understanding (e.g., provide alternative solutions)

Annex B4: Case Study Presentation Rubric

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.	Case Studies

Traits	1-5 Below Expectation	6 Met Expectation	6-10 Above Expectation

Communication Outcome • Has a clear message for audience • Maximizes likelihood of audience accepting the message	Central message is not explicitly stated in the presentation. Main points are not clearly identified, audience unsure of the direction of the message.	Satisfactory	Central message is precisely stated; main points are clearly identified.
Situational Factors • Addresses audience needs • Builds rapport with audience	Topic is irrelevant to audience needs and interest. No attempt made to connect topic to audience.	Satisfactory	Connection of topic to audience needs and interest is stated with sophistication. Identifies and expresses a deep understanding of the target audience.
Design Factors **Content** • Presents relevant information • Supports main points with strong evidence	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.	Satisfactory	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 **Structure** • Organises content coherently • Signals transitions between points	Organizational pattern (specific introduction and conclusion, sequenced materials, and transitions) is not observable.	Satisfactory	Organizational pattern is clearly and consistently observable and makes the content of the presentation cohesive.
Design Factors **Verbal** • Speaks at appropriate speed and volume • Uses correct grammar and pronunciation	Grammar, pronunciation and word choice are deficient. Vocal delivery is too soft or too fast to understand; gap-fillers interfere with expression.	Satisfactory	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 **Non-Verbal** • Establishes eye contact • Uses gestures and movement to convey energy and confidence	Eye contact, posture, gestures, movement and facial expressions are inappropriate and significantly distracting.	Satisfactory	Eye contact, posture, gestures, movement and facial expressions make the presentation compelling, and speaker appears polished and confident.

ANNEX C: CURRENT COURSE CONTENT

Academic Year	2021/2022 **Semester** 2
Course Coordinator	Shinichi Kamiya
Course Code	BA2201
Course Title	Actuarial Economics
Pre-requisites	AB0901 or HE9091
No of AUs	4
Contact Hours	52
Seminar Hours	Friday 0830-1230 @LT26

A) Course Aims/Description

The aim of this course is to introduce students major in actuarial science to the core economic principles and how these can be used in a business environment to help decision making and behavior. It provides microeconomic and macroeconomic foundations, both from the point of view of individuals and firms, particularly focusing on topics covered by the IFoA Subject CB2 Business Economics. Actuarial science students who perform well in this seminar will earn exam exemption for Subject CB2.

B) Intended Learning Outcomes (ILO)/Objectives
On successful completion of this course the student will be able to:

ILO 1. Discuss consumer demand and behavior.
ILO 2. Evaluate a firm's decision on product selection.
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C) Course Content

- Foundations of microeconomics: demand-supply
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- Macroeconomics: Market equilibrium, money and interest rates, fiscal and monetary policy, aggregate supply, unemployment and inflation, supply-side policies

D) Assessment (includes both continuous and summative assessment)

E) Formative feedback

Feedback is central to this course. You will receive both written and verbal feedback from me about your presentations.

F) Learning and Teaching approach

Approach	How does this approach support you in achieving the learning outcomes?

Seminars	The interactive seminars where there is ample opportunities for open discussion on the conceptual questions raised in the class allows you to think critical and share their ideas and concept with the class. This also allows me to get the concepts clearly through the entire class by involving you and ensure that the targeted learning outcomes are being achieved

Component	ILO Tested	NBS Learning Goal (Refer to Annex C for list)	Weightage	# Team/Individual	Assessment Rubrics (Refer to appendix)
1. Final Examination	ILO1-ILO11	Acquisition of knowledge, Problem Solving & Decision Making	70%	Individual	N.A
2. Insurance Market Simulation	ILO1-ILO4	Problem Solving & Decision Making	10%	Group (See Annex A(i) for the detail description of the simulation and Annex B for peer evaluation)	PSDM; Teamwork & Interpersonal Skills
3. Case Studies (Presentation, Discussion)	ILO1-ILO11	Oral Communication	10%	Team presentation (each member must present; See Annex A(ii) for the detail description of the case study and Annex B for peer evaluation)	Oral Communication
4. Class Participation in Case Studies	ILO1-ILO11		10%	Individual	Oral Communication
Total			100%		

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

- Textbook: Economics. 7th ed. John Sloman, Dean Garratt, Jon Guest, 2018. ISBN:978-1292187853.
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(3) General
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J) Course Instructors

Instructor	Office Location	Phone	Email	Consultation Hours

Shinichi Kamiya	S3-B1B-64	6970-5718	skamiya@ntu.edu.sg	By prior appointment via email

K) Planned Weekly Schedule

Week	Topic	ILO	Readings/ Activities
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2 (21 Jan)	Foundations of microeconomics	ILO1-2	SGG Ch. 3
3 (28 Jan)	Consumer demand and behavior	ILO1-2	SGG Ch. 4 / W3 Case study
4 (4 Feb)	Supply	ILO2-3	SGG Ch. 6 / W4 Case study
5 (11 Feb)	Profit maximization	ILO3-4	SGG Ch. 7-8 / W5 Case study
6 (18 Feb)	Firm behavior	ILO5	SGG Ch. 9 / W6 Case study
7 (25 Feb)	Insurance market simulation	ILO1-5	Simulation
(4 Mar)	*Recess*		
8 (11 Mar)	Foundation of macroeconomics	ILO6	SGG Ch. 15 / W8 Case study
9 (18 Mar)	Macroeconomic equilibrium	ILO7	SGG Ch. 17 / W9 Case study
10 (25 Mar)	Money and interest rate	ILO8-9	SGG Ch. 18 / /W10 Case study
11 (1 Apr)	Supply, inflation, unemployment	ILO10	SGG Ch. 19-20 / W11 Case study
12 (8 Apr)	Fiscal and monetary policy, supply-side policies	ILO11	SGG Ch. 22-23 / W12 Case study
13 (15 Apr) *Good Friday*	Review		

Insurance Market Simulation Market

(subject to change)

Overview:
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Bid Result (P)	Lowest	2nd	3rd	4th	5th	6th	7th	8th	8th or higher
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- Lines of business are characterized by their aggregate losses (S) distributions:
  - Auto insurance: Normally distributed with mean=10B and sigma=0.3B ($9.7B<S<\infty$)
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- If you got a market share of catastrophe insurance, you <u>MUST</u> purchase reinsurance for at least 50% of the share (K=0.5).
  - Reinsurance premium is 0.2B times coverage (i.e., 0.2B*M*K)
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Process:
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19. Repeat this process until we run out of time.
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Evaluation :
- Insurers are evaluated according to the capital remained at the end of the game.

Result	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	Bankruptcy
Quiz Mark	10	9	8.5	8	7.5	7	6	5	5	3

- Operators and regulators are endowed with 8 marks. Their marks will be adjusted by their performance.
- Your individual marks could be different from your team marks. Your marks depend on your contribution to your team, determined by peer evaluation.

Annex A(ii)

Team Case Research Study Presentation (30 min; 1 or 2 presentations per week)

vi) The objectives of the team case study are 1) for presenters to teach a textbook chapter by using real cases in Singapore or APAC context and 2) for audience to learn the textbook chapter effectively.

vii) Your team presentation will be evaluated by its content and the quality of the presentation. The effectiveness of the case studies in learning the week's topic will be the key component of the evaluation.

viii) The instructor and audience (classmates) will evaluate your presentation (refer to oral communication rublic). Both evaluations are equally weighted.

ix) Pick Asia-based companies (e.g. Shoppee, BreadTalk, Osim, SIA, Keppel and others) in microeconomic presentations. For macroeconomic presentations, pick Singapore government and other governments.

Sample Peer Evaluation Used in an Undergraduate Course

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:

5. If a member's average rating is ≥ 4, the member will receive **100%** of the overall mark awarded to the team project.

6. If a member's average rating is < 4 but ≥ 3, the member will receive **80%** of the overall mark awarded to the team project.

7. If a member's average rating is < 3 but ≥ 2, the member will receive **50%** of the overall mark awarded to the team project.

8. 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	
1. Roles and Responsibility (RR) Behaves professionally by upholding responsibility and assuming accountability for self and others in progressing towards the team's goal.	**Scant** 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.	**Substantially Developed** Always fulfills responsibilities; performs his/her role within the group with enthusiasm and demonstrates willingness to work collaboratively.
	Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed	
2. Communication (CM) Identifies appropriate mechanisms to coordinate and correspond with team members.	**Scant** Modes of communication are not appropriate, causing confusion and miscommunication among team members.	**Substantially Developed** Modes of communication are appropriate, and maintaining timely communication and correspondence with team members.
	Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed	
3. Conflict Resolution (CR) Resolves conflicts using a variety of approaches.	**Scant** Does not recognize conflicts or is unwilling to resolve conflicts.	**Substantially Developed** Consistently resolves conflicts through facilitating open discussion and compromise.
	Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed	
4. Contributions (CT) Contributes positive input for the team; effectively utilizes one's knowledge and expertise.	**Scant** Largely disinterested in working in a group and refuses to participate; observes passively or is unwilling to share information with other team members.	**Substantially Developed** <u>Actively attends and participates in all activities and provides meaningful contribution in articulating ideas and opinions.</u>
	Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed	
5. Relationship (RS) Maintains cooperative interaction with other team members regardless of individual /cultural differences and respects diverse perspectives.	**Scant** Rarely listens to others and does not acknowledge the opinions that differ from his/her own.	**Substantially Developed** Engages in respectful relationships with all other members in the team. Embraces and accepts diverse points of view without prejudice.
	Evaluation: Scant 1 2 3 4 5 6 7 Substantially Developed	

References:

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

Assessment Measure (Rubric)

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.	Insurance market simulation

Traits	<5 Below Expectation	6 Met Expectation	>6 Above Expectation
Understand the nature of insurance market and make proper decisions	Misunderstand the question or miss out significant parts of the analyses 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.
Understand and follow the insurance regulations	Misunderstand the question or miss out significant parts of the analyses 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.

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	1 Not Yet	6 Satisfactory	10 Substantially Developed
Communication Outcome • Has a clear message for audience • Maximizes likelihood of audience accepting the message	Central message is not explicitly stated in the presentation. Main points are not clearly identified, audience unsure of the direction of the message.	Satisfactory	Central message is precisely stated; main points are clearly identified.

Situational Factors • Addresses audience needs • Builds rapport with audience	Topic is irrelevant to audience needs and interest. No attempt made to connect topic to audience.	Satisfactory	Connection of topic to audience needs and interest is stated with sophistication. Identifies and expresses a deep understanding of the target audience.
Design Factors **Content** • Presents relevant information	Content is erroneous or irrelevant; references and supporting materials are absent. Lacks of depth in content and little insights are exhibited.	Satisfactory	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.

• Supports main points with strong evidence	Presentation falls outside set time parameters.		
Design Factors **Structure** • Organises content coherently • Signals transitions between points	Organizational pattern (specific introduction and conclusion, sequenced materials within the body, and transitions) is not observable.	Satisfactory	Organizational pattern is clearly and consistently observable and makes the content of the presentation cohesive.
Design Factors **Verbal** • Speaks at appropriate speed and volume • Uses correct grammar and pronunciation	Grammar, pronunciation and word choice are deficient. Vocal delivery is too soft or too fast to understand; gap-fillers interfere with expression.	Satisfactory	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 **Non-Verbal** • Establishes eye contact • Uses gestures and movement to convey energy and confidence	Eye contact, posture, gestures, movement and facial expressions are inappropriate and significantly distracting.	Satisfactory	Eye contact, posture, gestures, movement and facial expressions make the presentation compelling, and speaker appears polished and confident.

List of NBS Learning Goals

LEARNING GOAL	LEARNING OBJECTIVE	CHECK
	TASK SKILLS	
Acquisition of Knowledge	The ability to demonstrate understanding of the various economic concepts introduced in the seminars. Effectiveness is measured by the clarity of the solutions and workings provided.	☑
Ethical Reasoning	The ability to recognize and understand ethical issues, and to apply sound ethical reasoning.	☐
Critical Thinking & Creative Thinking	The ability to define, examine, evaluate, analyze and synthesize various arguments and knowledge to form independent judgment.	☐
	The ability to provide insight in an innovative way characterized by high degree of adaptiveness.	☐
Problem Solving & Decision Making	The ability to identify problem, generate a plan to solve problem, implement and evaluate the plan and make sound business decision.	☑
Planning & Execution	The ability to set clear priorities and plans of action for the task and define task objectives to fulfill goals within a planned schedule for execution.	☐
	PEOPLE SKILLS	
Oral Communication & Written Communication	The ability to communicate well with others verbally so that it clearly expresses the intended message and is understandable and useful to the receiving party.	☑
	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.	☐
Negotiation	The ability to systematically plan and prepare for negotiation and apply negotiation skills in personal and professional practice.	☐
Cultural Intelligence	The ability to function effectively in situations characterized by cultural diversity.	☐
Teamwork & Interpersonal Skills	The ability to work effectively with others in a group setting.	☑
Motivation & Development of Self & Others	The ability to develop a better understanding of one's strengths and weaknesses, and to learn to view others and mistakes positively as sources of personal and professional development.	☐

Please write to NBS Accreditation office (nbsaccro@ntu.edu.sg) for sample rubrics.