

Annexe A: New/Revised Course Content in OBTL+ Format

Course Overview

The sections shown on this interface are based on the templates [UG OBTL+](#) or [PG OBTL+](#)

If you are revising/duplicating an existing course and do not see the pre-filled contents you expect in the subsequent sections e.g. Course Aims, Intended Learning Outcomes etc. please refer to [Data Transformation Status](#) for more information.

Expected Implementation in Academic Year	
Semester/Trimester/Others (specify approx. Start/End date)	
Course Author * Faculty proposing/revising the course	Lee-Chua Lee Hong
Course Author Email	clhlee@ntu.edu.sg
Course Title	Engineering Economics and Finance
Course Code	CV4107
Academic Units	3
Contact Hours	39
Research Experience Components	Not Applicable

Course Requisites (if applicable)

Pre-requisites	
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

Course Aims

The subject is aimed to provide you with a sound understanding of the principles, basic concepts, and methodology of engineering economy and sources of finance. Upon completion of the course, you should be able to perform economic evaluation and financial analysis of investments and projects.

Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

ILO 1	Apply appropriate assumptions when evaluating economic aspects of projects
ILO 2	Perform quantitative economic analysis of project evaluation
ILO 3	Analyze economic scenarios based on principles of engineering economics
ILO 4	Apply financial analysis techniques and skills for engineering practice to analyze and evaluate the financial condition of a company
ILO 5	Examine the similarities and differences of the various financial instruments so that suitable tools can be employed

Course Content

	Topic
1.	Introduction
2.	Introduction to Interest
3.	Effects of Time and Interest on Money
4.	Economic Evaluation of Alternatives
5.	Financial Accounting
6.	Depreciation Accounting
7.	After-tax Economic Analysis
8.	Effects of Inflation on Economic Evaluation
9.	Replacement Analysis
10.	Sources of Finance
11	Decision Making under Uncertainty

Reading and References (if applicable)

Textbook: Blank, L. and Tarquin, A. (2017). Engineering Economy, 8th ed., McGraw-Hill Education, New York.

Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	Introduction and Introduction to Interest	1			Tutorial and lectures
2	Effects of Time and Interest on Money	1			Tutorial and lectures
3	Economic Evaluation of Alternatives	1-3			Tutorial and lectures
4	Economic Evaluation of Alternatives	1-3			Tutorial and lectures
5	Financial Accounting	4-5			Tutorial and lectures
6	Depreciation Accounting and After-tax Economic Analysis(1)	1-4			Tutorial and lectures Depreciation Accounting and After-tax Economic Analysis(1)
7	After-tax Economic Analysis(2) and Effects of Inflation on Economic Evaluation	1-4			Tutorial and lectures
8	Replacement Analysis	1-4			Tutorial and lectures
9	Sources of Finance	1-5			Tutorial and lectures
10	Sources of Finance	1-5			Tutorial and lectures

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
11	Decision Making under Uncertainty	1-4			Tutorial and lectures
12	Decision Making under Uncertainty	1-4			Tutorial and lectures
13	In-Class Course Review				Tutorial and lectures

Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Lectures	Approach allows you to apply principles and methodologies and the relationship with other factors (e.g., environmental). This gives you needed background for outcomes (1) to (5).
Tutorials	Mostly on analytical and computation problems. The tutorials give you practice in analysing problems that address outcomes (1) to (5).
Proposed TEL: short cases discussed in class	Approach aims to allow you to align with real-world practices of the subject.

Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Team/Individual	Rubrics	Level of Understanding
1	Summative Assessment (EXAM): Others([final examination])	1-5	EAB SLO* a, k	60	Individual	Analytic	Multistructural
2	Continuous Assessment (CA): Others([quiz/test])	1-3	EAB SLO* a, k	20	Individual	Analytic	Multistructural
3	Continuous Assessment (CA): Others([quiz/test])	1-5	EAB SLO* a, k	20	Individual	Holistic	Relational

Description of Assessment Components (if applicable)

Formative Feedback

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NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
Adaptability	Basic
Building Inclusivity	Basic
Care for Environment	Basic
Communication	Basic
Creative Thinking	Basic

Course Policy

Policy (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. On the use of technological tools (such as Generative AI tools), different courses / assignments have different intended learning outcomes. Students should refer to the specific assignment instructions on their use and requirements and/or consult your instructors on how you can use these tools to help your learning. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Policy (General)

Students are expected to take all scheduled quizzes. Students are expected to take responsibility to follow up with course notes, assignments and course related announcements. Students are expected to participate in class discussions and activities.

Policy (Absenteeism)

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. There will be no make-up opportunities for in-class activities.

Policy (Others, if applicable)

Last Updated Date: 14-06-2024 01:23:11

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