The Hong Kong University of Science and Technology (Guangzhou)

UG Course Syllabus Template

[Course Title]Technology & Innovation: Social & Business Perspectives

[Course Code] UCUG1800

[No. of Credits] 3

[Any pre-/co-requisites] NA

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Course Description

The purpose of this course is to expose you to the nature and dynamics of technological innovation, and to train you to think critically and systematically from both business and social perspectives. The course will use a combination of lectures, case studies, guest speakers, team projects, and a field trip. Because of the fast- paced nature of the course, it is vitally important that you come to class prepared and ready to discuss the topics. If you stay up on the material, you will learn more during the discussions and be successful at the assignments.

Intended Learning Outcomes (ILOs)

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

1. State the fundamental concepts involved in the development of new technology and innovation.

2. Explain and interpret various technology and innovation strategies.

3. Analyze and evaluate the strengths and weaknesses of different innovation strategies.

4. Identify and design effective innovation and technology strategies.

SCHEDULE

Week	Topics and Readings
1 ILO1 ILO2	**Course overview & Introduction （Part I）** ✓ *Reading*: Chapter 1 ✓ *Concepts*: innovation， nature of technology
2 ILO1 ILO2	**Introduction （Part II）** ✓ *Reading*: Chapter 1 ✓ *Concepts*: GDP, externalities, innovation funnel
3 ILO1 ILO2	**Sources of Innovation（Part I）** ✓ *Reading*: Chapter 2 ✓ *Concepts*: complements, complex & tacit knowledge
4 ILO1 ILO2	**Sources of Innovation（Part II）** ✓ *Reading*: Chapter 2 ✓ *Concepts*: technological cluster, technological spillover
5 ILO1 ILO2 ILO3	**Technology Diffusion & S-curves （Part I）** ✓ Individual Ideation due ✓ *Reading*: Chapter 3 ✓ *Concepts*: S-curve of performance improvement
6 ILO1 ILO2 ILO3	**Technology Diffusion & S-curves （Part II）** ✓ *Reading*: Chapter 3 ✓ *Concepts*: S-curve of diffusion
7 ILO1 ILO2 ILO3	**Setting Team Project** ✓ In teams, you will co-create a new product or service with a strong technological innovation focus, a justified business model, and a positive social impact.
8 ILO1 ILO2 ILO3	**Standard Setting and Dominant Design （Part I）** ✓ *Reading*: Chapter 4 ✓ *Concepts*: Utility analysis, dominant design
9 ILO1 ILO2	**Standard Setting and Dominant Design （Part II）** ✓ *Reading*: Chapter 4 ✓ *Concepts*: stand-alone vs. ecosystem

ILO3	
10 ILO2 ILO3 ILO4	**Timing of Entry（Part I）** ✓ *Reading*: Chapter 5 ✓ *Concepts*: first-mover vs early-follower
11 ILO2 ILO3 ILO4	**Timing of Entry （Part II）** ✓ *Reading*: Chapter 5 ✓ *Concepts*: Factors of first-mover advantage
12 ILO2 ILO3	**Field trip (TBD)**
13 ILO4	**Final Team presentation** **Team presentations delivered in class (20-min presentation+ 5-min Q&A for each team)**

This schedule is a guideline only; the instructor reserves the right to change the schedule as necessary

Assessment and Grading

This course will be assessed using criterion-referencing and grades will not be assigned using a curve. Detailed rubrics for each assignment are provided below, outlining the criteria used for evaluation.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)	Due date
In-class discussion	25%	NA
Individual Ideation	15%	Week 5
Group Project Presentation	25%	Week 13
Peer Review (within group)	10%	Week 13
Group Case Study	25%	Week 14

* Assessment marks for individual assessed tasks will be released within two weeks of the due date. This schedule is a guideline only; the instructor reserves the right to change the schedule as necessary

Mapping of Course ILOs to Assessment Tasks

Assessed Task	**Mapped ILOs**	**Explanation**
In-class discussion, case study, and Individual Ideation	ILO1,ILO2,ILO3	The in-class discussion， case study, and individual ideation assess students' ability to critically evaluate and analyze business and social innovation cases, demonstrating higher-order thinking skills of systematical analysis, critical thinking, and effective communication.
Group Project presentation	ILO2, ILO3, ILO4	The final group project assesses students' ability to collaboratively solve a problem by applying the concepts and higher-order thinking sills (e.g., teamwork, critical thinking) learned from this course. The rubrics for the presentation will be provided.

Grading Rubrics

Detailed rubrics for each assignment will be provided with the release of each assignment. These rubrics clearly outline the criteria used for evaluation. Students can refer to these rubrics to understand how their work will be assessed.

Final Grade Descriptors:

Grades	**Short Description**	**Elaboration on subject grading description**
A	Excellent Performance	1. Demonstrate solid understanding of foundational concepts for high-level performance in individual ideation (ILO1); 2. Show higher-level systematic and critical thinking skills for explaining, analyzing, and evaluating case studies based on instructor's observation for in-class discussion(ILO2, ILO3);

		3. Show high-level collaborative problem-solving skills for teamwork based on peer review (ILO4)
B	Good Performance	1. Demonstrate solid understanding of foundational concepts for satisfactory performance in individual ideation (ILO1); 2. Show intermediate systematic and critical thinking skills for explaining, analyzing, and evaluating case studies based on instructor's observation for in-class discussion (ILO2, ILO3); 3. Show intermediate collaborative problem-solving skills for teamwork based on peer review (ILO4).
C	Satisfactory Performance	1. Demonstrate basic understanding of foundational concepts for satisfactory performance in individual ideation (ILO1); 2. Show basic systematic and critical thinking skills for explaining, analyzing, and evaluating case studies based on instructor's observation for in-class discussion (ILO2, ILO3); 3. Show basic collaborative problem-solving skills for teamwork based on peer review (ILO4)
D	Marginal Pass	1. Demonstrate basic understanding of foundational concepts for satisfactory performance in individual ideation (ILO1); 2. Show potential systematic and critical thinking skills for explaining, analyzing, and evaluating case studies based on instructor's observation for in-class discussion (ILO2, ILO3); 3. Show perseverance and effort to learn necessary collaborative problem-solving skills for teamwork based on peer review (ILO4)
F	Fail	1. Lack sufficient understanding of foundational concepts for unsatisfactory performance in individual ideation (ILO1); 2. Lack systematic and critical thinking skills for explaining, analyzing, and evaluating case studies based on instructor's observation for in-class discussion (ILO2, ILO3); 3. Lack necessary collaborative problem-solving skills for teamwork based on peer review (ILO4) 4. Miss more than two class sessions

Course AI Policy

ChatGPT or other AI assistance are allowed on graded assignments, but students are solely responsible for the final content.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas within two weeks of submission. Students who have questions about their marks should consult the instructor within five working days after the marks are received.

Resubmission Policy

NA

Required Texts and Materials

The main reference includes Schilling, M.A. Strategic Management of Technological Innovation, 7th edition. New York: McGraw-Hill Publishers, available through our library in electronic format.

Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST(GZ)'s Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to Regulations for Academic Integrity and Student Conduct for the University's definition of plagiarism and ways to avoid cheating and plagiarism.

[Optional] Additional Resources

NA