City University of Hong Kong
Course Syllabus

offered Division of Building Science & Technology
with effect from Semester B 2017/18

Part I Course Overview

Course Title:	Technology and Society
Course Code:	GE2311
Course Duration:	1 semester
Credit Units:	3 credits
Level:	A2, B2
Proposed Area: *(for GE courses only)*	☐ Arts and Humanities ☐ Study of Societies, Social and Business Organisations ✓ Science and Technology
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

(A 150-word description about the course)

This course aims to provide the students an understanding of the technological development and its influence on human living. The technological glories and classical antiquities of the early empires: China, the Greeks, Rome Byzantine and Islamic empires; the survival of technology through the medieval; technological aspect of the renaissance; the advent of steam and mechanical engineering, sanitary and hydraulic engineering; new technology bloom in 20th century; The influence of technology on all levels of human behaviour — family structure/relationship between sexes, interpersonal relations, government structure, social structure, work environment, the distribution of wealth and power, and others. Technological developments in the 21st century that concern every one of us: pollution, work place health hazards, social impact of computers and information explosion, green revolution, technology as a solution for the developing countries. Types of assessment tasks/activities are mainly tutorial discussions and project report.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs[#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Discover key breakthroughs on major aspects of technological development in important historic periods.	30%	✓		
2.	Explore major likely technological breakthroughs in the 21st century and their potential impacts on cultural, economic, environmental, family/relationship between sexes, health, industrial, political, social aspects of sustainable human development.	30%	✓	✓	
3.	Analyse the impact of technological development on cultural, economic, environmental, family/relationship between sexes, health, industrial, political aspects of society and the individual.	40%		✓	✓
		100%			

** If weighting is assigned to CILOs, they should add up to 100%.*

[#] Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: *Accomplishments*
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
Pre-Class Study	This is a combination of selected reference books and/or lecture notes reading before each seminar session.	✓	✓	✓	1 hr/wk
Seminar	This is an in-class activity in groups involving oral presentation by lecturers on a selected topic through illustrating cases, real-life examples.	✓	✓	✓	1.5 hr/wk
Tutorial Discussion	Marks for class discussions, debates, and contributions to on-line discussions will encourage, reward, and assess students' active contributions to analysis and their active engagement with other students. For class discussions, question generation and answering strategy is applied. Students are required to generate and/or to answer questions actively and to engage in inquiry together with the lecturer. The strategy is both learning and teaching activity and a continuous assessment method. Questions are generated by students, answered by peers or by the lecturer. An individual student is assessed by the depth of the questions that he/she raises and/or the quality of the answers that he/she gives. It is also a chance for each student to develop her/his effective oral communication skills.	✓	✓	✓	1.5 hr/wk
Independent study	An independent study provide a chance for each student to demonstrate his/her ability to evaluate objectively, observe accurately, draw reasonable inferences, perceive relationships, to develop his/her ability to correlate amongst various factors, develop critical thinking skills to assess ideas, and synthesis of knowledge across technologies and the society. Emphasis is put on analysis of the interaction amongst technological development, various aspects of the society and/or the individual.	✓	✓	✓	1 hr/wk
Examination	The essay-type examination provides an opportunity for each student to demonstrate the outcome of his/her independent study. The examination question(s) are sufficiently broad to contain each and every independent study. Each student is required to succinctly describe of the issue, organise her/his supporting points, and make a persuasive argument. It is also a chance for each student to develop her/his effective written communication skills.	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.			Weighting*	Remarks
	1	2	3		
Continuous Assessment: 50%					
At least 3 coursework assignments of the strategy of question generation and answering	✓	✓	✓	50%	
Examination: 50% (duration: 2 hours)					
Examination	✓	✓	✓	50%	
** The weightings should add up to 100%.*				100%	

Note: A student must obtain a minimum mark of 35 in both coursework and examination, and an overall mark of 40 to pass the course.

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Question generation and answering	Able to complete all assessment tasks and to demonstrate strong evidence of original thinking of the concepts and relations discussed, with effective oral communication.	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Examination	Capacity to analyse, synthesise and integrate from various angles based on various stand points, with clear explanations and logical justifications. Able to show evidence in arguments of extensive knowledge base, properly referenced, with effective written communication.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

The earliest builders, early empires and the conquest of materials, classical antiquities: China, the Greeks and Rome, ancient power and metallurgy, Byzantine and Islamic engineering, the Middle Ages, the Renaissance, the 17th and 18th centuries, the advent of steam and mechanical engineering, sanitary and hydraulic engineering, 20th century new technology.

The influence of technology on human behaviour, family structure/relationship between sexes, social activity, government structure, organization structure, work environment, interpersonal relations and the distribution of wealth and power, and others.

The 21st century developments in resources, energy, technology. The issues of pollution, work place health hazards, social impact of computers and information explosion, green revolution, technology and the developing world.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

Nil.

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1. Robert E. McGinn Science, technology, and society. Englewood Cliffs, N.J.: Prentice Hall, 1991. Circulation Collection - Q175.5 .M395
2. Martin Bridgstock et al. Science, technology, and society: an introduction. Cambridge, U.K. ; New York : Cambridge University Press, 1998. Circulation Collection - Q175.5 .S3738
3. Andrew Webster Science, technology, and society : new directions. New Brunswick, N.J. : Rutgers University Press, 1991. Circulation Collection - Q175.5 .W42
4. Linda S. Hjorth et al. (ed) Technology and society : a bridge to the 21st century. Upper Saddle River, N.J. , Prentice Hall, 2000. Circulation Collection - T14.5 .T44168
5. David L. Goetsch, John A. Nelson Technology and you. Albany, N.Y. : Delmar, 1987. Shatin Branch - C0301180
6. Maurice N. Richter, Jr. Technology and social complexity. Englewood Cliffs, N.J., Prentice Hall, 1991. Circulation Collection - T14.5 .R53
7. Edward C. Pytlik, Donald P. Lauda, David L. Johnson Technology, change, and society. Worcester, Mass. : Davis, 1985. Circulation Collection - T14.5 .P97
8. Rudi Volti Society and technological change. New York : St. Martin's Press, c1992. Circulation Collection - T14.5 .V67
9. Morton Winston, Ralph Edelbach (ed). Society, ethics, and technology. Australia; Belmont, CA : Wadsworth/Thomson Learning, 2000. Circulation Collection - T14.5 .S6385
10. Science, technology, and society [electronic resource], edited by Sal Restivo, Oxford University Press, 2005. Online access from Oxford reference online (http://www.oxfordreference.com/views/BOOK_SEARCH.html?book=t210&authstatuscode=202).
11. http://ocw.mit.edu/OcwWeb/Science--Technology--and-Society/
12. http://diplomaguide.com/articles/Free_Online_Science_Technology_and_Society_Courses_from_Top_Universities_-_Part_2.html
13. http://www.ee.bilkent.edu.tr/~ge301/

Annex
(for GE courses only)

A. Please specify the Gateway Education Programme Intended Learning Outcomes (PILOs) that the course is aligned to and relate them to the CILOs stated in Part II, Section 2 of this form:

GE PILO	Please indicate which CILO(s) is/are related to this PILO, if any *(can be more than one CILOs in each PILO)*
PILO 1: Demonstrate the capacity for self-directed learning	CILOs 1 to 3: Students are advised and required to digest recommended readings - both books and online materials.
PILO 2: Explain the basic methodologies and techniques of inquiry of the arts and humanities, social sciences, business, and science and technology	CILOs 1 and 2: Students learn to understand the technological way of solving problems that society faces.
PILO 3: Demonstrate critical thinking skills	CILO 3: Students learn to analyse how technology as one of the major factors in change society and individual life, to generate in-depth questions and to provide thoughtful answers.
PILO 4: Interpret information and numerical data	CILO 3: Students learn to understand quantitative analyses of the development and transformation of technology and the society as a whole.
PILO 5: Produce structured, well-organised and fluent text	CILOs 1 to 3: Students learn to produce well-organised and fluent reports.
PILO 6: Demonstrate effective oral communication skills	CILOs 1 to 3: Students learn to conduct effective discussions, to ask and to answer questions.
PILO 7: Demonstrate an ability to work effectively in a team	
PILO 8: Recognise important characteristics of their own culture(s) and at least one other culture, and their impact on global issues	
PILO 9: Value ethical and socially responsible actions	
PILO 10: Demonstrate the attitude and/or ability to accomplish discovery and/or innovation	CILOs 2 to 3: Students learn to discover problems that the contemporary society faces as results of technological developments and to suggest effective solutions.

GE course leaders should cover the mandatory PILOs for the GE area (Area 1: Arts and Humanities; Area 2: Study of Societies, Social and Business Organisations; Area 3: Science and Technology) for which they have classified their course; for quality assurance purposes, they are advised to carefully consider if it is beneficial to claim any coverage of additional PILOs. General advice would be to restrict PILOs to only the essential ones. (Please refer to the curricular mapping of GE programme: http://www.cityu.edu.hk/edge/ge/faculty/curricular_mapping.htm.)

B. Please select an assessment task for collecting evidence of student achievement for quality assurance purposes. Please retain at least one sample of student achievement across a period of three years.

Selected Assessment Task
Examination answer book