

The Hong Kong University of Science and Technology

UG Course Syllabus

Fall 2026

Science, Technology, and Society: Historical and Cultural Approaches

HUMA 1622

3 credits

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Course Description

How science, technology, and medicine work in the present can be illuminated by a study of their pasts. This course is an introduction to those modern histories, presented as a series of carefully-chosen case studies. Students will come to understand how science, technology, and medicine are deeply entangled with societies and cultures. The course will discuss topics such as the invention and innovation of the telephone; the attempt to predict earthquakes; science and the environment; the modern survival of 'traditional' Chinese medicine; shifting ideas about robots; and how and why young people invented the personal computer, among others. By the end of the course, students will have a much clearer picture of how science, technology, and medicine are co-produced socially and culturally, and be able to apply those lessons to the world we live in now.

Intended Learning Outcomes (ILOs)

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

1. Explain the concept of "Social Construction of Science and Technology" and apply it (e.g. in a case study).
2. Analyze important milestones and debates in the modern history of science, technology, and medicine
3. Critically reflect on the role of science and technology in their own lives and that of their societies.
4. Initiate, lead, and engage in discussion about the conjunction of science, technology, medicine, and society.

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
Attendance	15%	N.A.
In-class (Lecture and Tutorial) participation	25%	N.A.
Mid-term assessment	30%	Week 7 (TBC)
Final assessment	30%	Week 13

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Mapped ILOs	Explanation
In-class (Lecture and Tutorial) participation	ILO3, ILO4	Students will be split into groups of 4-5 and engage in an active discussion for 15-20 minutes, then present their arguments to the entire cohort for further debate.
Mid-term assessment	ILO1, ILO2	This will cover the first half of the course and will take place in-class on week 7 (TBC). It will require short responses identifying the meaning and significance of key words and concepts, as well as images, from both the lectures and readings. I will flash these keywords and images sequentially on the screen and give you a few minutes to write about each one.
Final assessment	ILO1, ILO2, ILO3	It will mostly cover the second half of the course, but some questions could also more generally cover themes related to the course as a whole. The format will be different from the mid-term, and will just involve written responses to written questions.

Grading Rubrics

1. In-Class Participation (Lecture and Tutorial)

Criteria	Excellent (A)	Good (B)	Satisfactory (C)	Needs Improvement (D/F)
Preparation and Engagement	Consistently well-prepared; actively contributes throughout discussions and activities.	Usually prepared; participates regularly and constructively.	Participates occasionally but preparation is uneven.	Rarely participates or appears unprepared.
Quality of Contributions	Contributions are insightful, evidence-based, and demonstrate critical engagement with course materials.	Contributions show good understanding and some critical reflection.	Contributions show basic understanding but limited analysis.	Contributions are minimal, inaccurate, or unrelated to discussion.
Group Collaboration	Works effectively with peers, encourages participation, and helps advance discussion.	Cooperates well with peers and contributes positively to group work.	Participates in group activities but with limited collaboration.	Does not engage constructively with group members.
Presentation of Arguments	Clearly articulates arguments and responds thoughtfully to questions and counterarguments.	Presents arguments clearly with reasonable supporting evidence.	Presents basic ideas but lacks clarity or supporting evidence.	Unable to communicate arguments effectively.

2. Mid-Term Assessment

Criteria	Excellent (A)	Good (B)	Satisfactory (C)	Needs Improvement (D/F)
Identification of Key Terms, Concepts, and Images	Accurately identifies nearly all terms/concepts/images.	Accurately identifies most terms/concepts/images.	Identifies basic features but with some inaccuracies.	Frequent inaccuracies or inability to identify material.

Understanding of Meaning	Demonstrates comprehensive understanding of definitions and meanings.	Demonstrates solid understanding with minor omissions.	Demonstrates basic understanding but lacks precision.	Demonstrates limited or incorrect understanding.
Explanation of Significance	Clearly explains historical, cultural, social, or theoretical significance with strong contextualization.	Explains significance with appropriate context.	Provides limited discussion of significance.	Unable to explain significance adequately.
Use of Course Materials	Effectively integrates evidence from lectures and readings.	Uses relevant examples from course materials.	Refers to some course content but inconsistently.	Little or no reference to course materials.

3. Final Assessment

Criteria	Excellent (A)	Good (B)	Satisfactory (C)	Needs Improvement (D/F)
Knowledge and Understanding	Demonstrates thorough and accurate understanding of course content.	Demonstrates strong understanding with minor gaps.	Demonstrates basic understanding of major themes.	Demonstrates limited understanding of course content.
Analysis and Critical Thinking	Develops sophisticated, well-reasoned arguments and evaluates competing perspectives.	Presents clear arguments with appropriate analysis.	Demonstrates limited analytical depth.	Primarily descriptive with little analysis.
Application of Concepts	Effectively applies concepts and theories to answer questions.	Applies concepts accurately in most cases.	Applies concepts at a basic level.	Struggles to apply concepts appropriately.
Use of Evidence	Integrates specific evidence from lectures, readings, and course materials to support claims.	Uses relevant evidence to support arguments.	Uses limited or generalized evidence.	Provides little or no supporting evidence.
Written Communication	Responses are clear, coherent,	Responses are organized and generally clear.	Organization or clarity is inconsistent.	Writing is unclear, poorly organized,

	well-organized, and persuasive.			or difficult to follow.
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Final Grade Descriptors

[As appropriate to the course and aligned with university standards]

Grades	Short Description	Elaboration on subject grading description
A	Excellent Performance	Outstanding achievement of learning outcomes; demonstrates excellent knowledge, analytical ability, and communication.
B	Good Performance	Strong achievement of learning outcomes; demonstrates good understanding and analysis.
C	Satisfactory Performance	Satisfactory achievement of learning outcomes; demonstrates basic competence and understanding.
D	Marginal Pass	Limited achievement of learning outcomes; significant weaknesses evident.
F	Fail	Does not meet minimum learning outcome requirements.

Course AI Policy

The use of Generative AI in project is permitted with proper acknowledgement and will NOT be contributed to the students' work.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas or email, whichever is appropriate. Students who have further questions should consult the instructor within five working days after the feedback is received.

Late Submission Policy

There is no take-home assignment for this course.

Required Texts and Materials

No specific Textbook

Additional Resources

To update during the semester.

Academic Integrity

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