The Hong Kong University of Science and Technology

UG Course Syllabus (Fall 2025-26)

[Course Title] Human-Computer Interaction

[Course Code] COMP4461

[No. of Credits] 3

[Any pre-/co-requisites] COMP 2011 OR COMP 2012 OR COMP 2012H

Name: [Instructor(s) Name] Xiaojuan Ma

Email: [Your Email Address] mxj@ust.hk

Office Hours: [Specify Office Hours and Location] Rm3507, by email appointment

Course Description

[Briefly describe the course content, key topics or themes, objectives, methods of instruction, e.g., lectures, discussions, projects].

This course is a broad introduction to Human-Computer Interaction (HCI), with an emphasis on techniques, models, theories, and applications for designing, prototyping, and evaluating current and future interactive systems for human use. HCI is an interesting and important area of study, providing the human perspective to computing. Besides technology and innovation, it also touches on issues like ethics and social responsibilities related to technologies in the real world. Selected topics include multimodal interaction design, usability evaluation, computer-supported cooperative work, assistive technologies, social computing, crowd computing, ubiquitous/mobile computing, virtual/augmented reality and gaming, agents and robots, and HCI applications in various domains such as education, health, urban sustainability, scientific discoveries, etc. The course consists of lectures, tutorials, group and individual projects, and exams.

Intended Learning Outcomes (ILOs)

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

1. Understanding the basic concepts and methods in HCI research.

2. Understanding the foundations and trends of HCI applications.

3. Design an interactive system using various methods through different design activities.

4. Prototype an interactive system with assorted digital and physical tools.

5. Evaluate an interactive system through user studies.

6. Communicate effectively with target users and different stakeholders in academia and industry.

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.

Assessment Task	Contribution to Overall Course grade (%)
Mid-Term	35%
Video Paper	10%
Group Projects	45%
Participation + Bonus	10%

Assessments:

[List specific assessed tasks, exams, quizzes, their weightage, and due dates; perhaps, add a summary table as below, to precede the details for each assessment.]

Assessment Task	Contribution to Overall Course grade (%)	Due date
Mid-Term Exams	35%	20/11/2025
Final Video Paper	10%	11/11/2025
Group Projects	45%	27/11/2025
Participation	10%	06/12/2025

Mapping of Course ILOs to Assessment Tasks

[add to/delete table as appropriate]

Assessed Task	Mapped ILOs	Explanation
Mid-Term Exams	ILO1, ILO2, ILO3, ILO5	This task assesses students' ability to explain and apply HCI concepts (ILO 1), theories, and methods (ILO2), propose plausible solutions to real-world problems (ILO3), and critically evaluate existing solutions (ILO5).
Group Projects	ILO1, ILO2, ILO3, ILO4, ILO5, ILO6	The group presentation and individual reflection assess students' ability to apply basic concepts (ILO1) and foundational methods and theories (ILO2) to design (ILO3), develop (ILO4), and evaluate (ILO5) interactive systems for human use, as well as communicate their design decisions and insights clearly (ILO6).
Final Video Paper	ILO1, ILO2, ILO3, ILO4, ILO5, ILO6	

		The individual presentation in the form of a video essay assesses students' ability to apply basic concepts (ILO1) and foundational methods and theories (ILO2) to design (ILO3), develop (ILO4), and evaluate (ILO5) interactive systems for human use, as well as communicate their design decisions and insights clearly (ILO6).
Participation	ILO1, ILO2, ILO4, ILO5	The tasks assesses students' ability to explain and apply HCI concepts (ILO 1), theories, and methods (ILO2), conduct fast prototyping (ILO4), and critically evaluate peers' designs (ILO5).

Grading Rubrics

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

Same as below.

Final Grade Descriptors:

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

Grades	**Short Description**	**Elaboration on subject grading description**
A	Excellent Performance	Demonstrates a comprehensive grasp of subject matter, expertise in problem-solving, and significant creativity in thinking. Exhibits a high capacity for scholarship and collaboration, going beyond core requirements to achieve learning goals.
B	Good Performance	Shows good knowledge and understanding of the main subject matter, competence in problem-solving, and the ability to analyze and evaluate issues. Displays high motivation to learn and the ability to work effectively with others.
C	Satisfactory Performance	Possesses adequate knowledge of core subject matter, competence in dealing with familiar problems, and some capacity for analysis and critical thinking. Shows persistence and effort to achieve broadly defined learning goals.
D	Marginal Pass	Has threshold knowledge of core subject matter, potential to achieve key professional skills, and the ability to make basic judgments. Benefits from the course and has the potential to develop in the discipline.
F	Fail	Demonstrates insufficient understanding of the subject matter and lacks the necessary problem-solving skills. Shows limited ability to think critically or analytically and exhibits minimal effort towards achieving learning goals. Does not meet the threshold requirements for professional practice or development in the discipline.

Course AI Policy

[State the course policy on the use of generative artificial intelligence tools to complete assessment tasks.]

The course is open to the use of generative artificial intelligence tools to complete assessment tasks with proper acknowledgement.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas within two weeks of submission. Feedback on assignments will include justifications of marks. Students who have further questions about the feedback including marks should consult the instructor and TA within five working days after the feedback is received.

Resubmission Policy

[If applicable, explain the policy for resubmitting work or reassessment opportunities, including conditions

and deadlines.]

N/A

Required Texts and Materials

[List required textbooks, readings, and any other materials]

REQUIRED:

- Interaction Design: beyond human-computer interaction (Wiley, 4th Edition)
  Helen Sharp, Yvonne Rogers, and Jenny Preece
- The UX Book: Process and guidelines for ensuring a quality user experience (Morgan Kaufmann, Elsevier)
  Rex Hartson and Pardha S. Pyla

OPTIONAL:

- Research methods in human-computer interaction (Morgan Kaufmann, Elsevier, 2nd Edition)
  Jonathan Lazar, Jinjuan Heidi Feng, and Harry Hochheiser
- Human-Computer Interfaces (4th Edition)
  Alan Dix

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.

[Optional] Additional Resources

N/A