



# Human Computer Interaction

Prof. Arthur Tang, Sungkyunkwan University

## SHORT COURSE DESCRIPTION

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This course covers the basic concepts, fundamental theories and current researches in human-computer interaction. Topics include principles, theories, methodologies, design, implementation, evaluation and research in computer interfaces. The objectives of this course are:

- to familiarize students with basic concepts of human computer interaction;
- to introduce students to theories and principles in computer interface design;
- to develop students' ability to design, conduct and analyze user studies for computer software; and
- to provide students with the knowledge of the design process for user interfaces.

## READING MATERIALS

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Recommended Textbook: Interaction Design - Beyond Human-Computer Interaction (4<sup>th</sup> edition), by Rogers, Sharp and Preece (ISBN 13: 978-1-119-02075-2)

- The textbook is not mandatory: You may choose to using the recommended textbook, or any other textbook in human computer interaction, or other online materials.
- Your first reading assignment is the syllabus. It is provided as a separated file.
- Other reading materials/slides will be provided throughout the course.

## COURSE REQUIREMENTS AND GRADING

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### Teaching Methodology

This course incorporated the Outcome Based Learning approach. It is a student-centered approach for teaching and learning. The course has a list of **Intended Learning Outcomes**. All **Teaching and Learning Activities** throughout the course are aimed to help students achieving these Intended Learning Outcomes. Throughout the semester, students will be assessed based on the **Assessments** aligned to the Intended Learning Outcomes, and the final grade will be determined based on these Assessments. In other words, any student who is able to demonstrate all the Intended Learning Outcome through all the Assessments, she/he will get an excellent grade.

### Course Intended Learning Outcomes

On successful completion of this course, students will be able to:

1. Understand and apply fundamental concepts in human computer interaction;
2. Design and conduct user experiments for computer interface;
3. Analyze and interpret data collected from user experiments;
4. Design computer interfaces to meet desired needs within realistic constraints;
5. Communicate effectively with stakeholders.

### Course Assessments

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| • Attendance  | 7%  |
| • Assignments | 63% |
| • Examination | 30% |

**Attendance (7%):**

It is the student's responsibility to attend all class session on time and stay for the whole period. Attendance will be recorded randomly during class time. If you missed the attendance during class time (e.g. if you are late to class, or if you are not paying attention to class), you will not be given another chance to submit it. If your absence is excused, bring the documentation (such as medical documentation) within one week after the absence and you will be given credit for that attendance if approved. **Credit will only be given to documented absence.**

According to university policy, a Fail Grade will be given to students who attend less than 80% of total number of class automatically.

**Assignments (63%):**

A number of assignments will be assigned throughout the course. The assignments will consist of in-class assignments and homework assignments. **No late assignment will be accepted.** If you missed the in-class assignment during class time (e.g. if you missed the class, are late to class, or are not paying attention to class), you will not be given another chance to submit it unless you have proper documentation for your absence. If your absence is excused, bring the documentation within two weeks after the absence and you will be given another chance to submit the missed in-class assignment if approved.

**Examination (30%):**

This course will have one examination. The examination is close book. No communication devices (computer, PDA, mobile phone, pager, etc) will be allowed in the exam. The examination covers the materials of the entire course.

**Grading**

- Grade of this course is on a pass/fail basis.
- SKKU regulations require students to attend at least 80% of all classes. A Fail grade will be assigned to students who attend less than 80% of total number of class automatically.
- Plagiarism and cheating will not be tolerated at all:
  - Student cannot supply or use work or answers that are not one's own.
  - BOTH providing and/or accepting assistance in examinations is violation of academic honesty.
  - You may discuss homework assignments with other students, but the assignments you submit must be entirely your own work.
  - Plagiarism will not be tolerated at all. Works completed by others used in your assignments should be cited properly.
  - In all incident of academic honesty, a Fail grade will be given to student(s) automatically.

## **TENTATIVE COURSE SCHEDULE**

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Note: This calendar is tentative and is subjected to modification throughout the semester.

### **– WEEK I –**

Thursday (27 June)

Lecture 1: Orientation; Introduction; Conceptualizing Interfaces

Friday (28 June)

Lecture 2: Sensation and Perception

### **– WEEK II –**

Monday (1 July)

Lecture 3: Sensation and Perception (cont.); Anthropometric Approach

Tuesday (2 July)

Lecture 4: Cognitive Approach

Wednesday (3 July)

Lecture 5: Cognitive Approach (cont.); Emotional Approach

Thursday (4 July)

Lecture 6: Interface Design Principles and Guidelines

### **– WEEK III –**

Monday (8 July)

Lecture 7: HCI Academic Research – Research Ethics

Tuesday (9 July)

Lecture 8: HCI Academic Research – Research Methodology

Wednesday (10 July)

Lecture 9: HCI Academic Research – Data Analysis

Thursday (11 July)

Lecture 10: Design and Evaluation – Design Lifecycle

### **– WEEK IV–**

Monday (15 July)

Lecture 11: Design and Evaluation – Establishing Requirements

Tuesday (16 July)

Lecture 12: Design and Evaluation – Design, Prototyping and Construction

Wednesday (17 July)

Lecture 13: Design and Evaluation – Evaluating Design

Thursday (18 July)

Lecture 14: Review

Friday (19 July)

Final Exam