

# Course Administration

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# Overview

## Course Administration

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## Course Administration

Downloads and Contact Info  
Why and what HCI  
Course Modules  
Course Outline  
Project  
Grading  
Textbooks

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# Downloads and Contact Info

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- Course materials at [Google Drive](#) or [chaklam.com](#)
- Google Classroom (Code: aeho4io)
- Email: [chaklam@ait.asia](mailto:chaklam@ait.asia)
- Office hours: Tuesday 9-10h. Calendar invite.

Let's have a short tour to [chaklam.com](http://chaklam.com), Google Drive, and Google classroom.

# Why and what HCI

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- HCI is **pervasive** and **multi-disciplinary**
  - User Interface
  - Input Devices: Mouse, Keyboard, Stylus, etc.
  - Applications
- Key goals
  - Reliability → Productivity → Creativity  
→ Engagement → **Well-Being**
- Research Areas
  - User Experience and Usability
  - Education, Health, Aging, Game applications
  - Interaction - VR, AR, Haptics, Pen, Eye, Voice, Gesture, Textiles, Brain, etc.
  - Understanding People
- Research Questions
  - What are some **new** forms of interaction?
  - What **human psychology** we need to consider?
  - How to **scientifically evaluate**?

# Flagship venues

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- ACM Conference on Human Factors in Computing Systems (ACM CHI)
- 3,000+ submissions and 4,000+ attendees
- <https://www.youtube.com/watch?v=-rQxyvxuv1U>
- Ideas about Apple Watch, iPhone, VR, AR etc. all originates from here 10+ years ago

# Some take home task

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- See Google Classroom
- Take a look on these videos, and see what you like
- Prep for project

# Course Modules

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- **Design** - principles and common mistakes
- **Human Factors** - capabilities and limitations
- **Experimental Design** - validity
- **Evaluation** - statistical analysis
- **Interaction** - elements and models

# Course Outline

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- Week 1: History of HCI
  - Vannevar Bush's "as we may think" - Invention of the mouse - Xerox Star - Macintosh - SIGCHI conference
- Week 2-3: Design of Everyday Things
  - Why Design is Difficult
  - Design Principles
  - Design Theory
- Week 4-5: Human Factors - perception, attention, memory, reasoning
- Week 6-7: Experimental Design
  - IV vs. DV
  - Within-subject vs. Between-subject
  - Control vs. Confounding vs. Random variables
  - Task and Procedure, Order Effects, Validity Analysis



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- **Week 8: Midterm Exam**
- Week 9, 11, 12: Analysis of Variances
- **Week 10: Project Phase 1: Research and Idea**
- **Week 13: Project Phase 2: Prototype**
- Week 14: Interaction Elements
  - Control-display gain
  - Latency
  - Modes
  - Bandwidth
- Week 15: Modeling Interaction
  - Fitts' law, Hick-Hyman Law, Keystroke-level model
- **Week 16: Final Exam**
- **Week 16++: Project Phase 3: Evaluation and Communication**

# Project

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- Groups of 3-4 people
- Final output: 4-10 pages SIGCHI formatted paper.
- Three phase: Research and Idea, Prototype, and Evaluation and Communication
- **Research and Idea Phase**
  - Review 16-20 papers in CHI in the past 2 years
  - Summarize the current research state based on the review
  - Identify a gap of the current research state
  - Identify a research question/problem
  - Identify multiple alternative solutions
  - **Submission (Week 10):**
    - INTRODUCTION, RELATED WORK section of the report (must use the SIGCHI format)
    - PPT presentation

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- **Prototype Phase**

- Develop a *working* prototype (sufficient for evaluation)
- **Submission (Week 13):**
  - DESIGN section of the report
  - PPT presentation with demo

- **Evaluation and Communication Phase**

- Perform empirical evaluation with at least 12 participants
- **Submission (Week 16):**
  - METHOD, RESULTS, DISCUSSION and CONCLUSION section of the report
  - PPT presentation with demo
  - 30-sec promotional video

# Team forming

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- Submit your team on Google Classroom

# Grading Criteria

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Rubric	Percentage
Assignments	10
Midterm Exam	20
Final Exam	30
Project: Research and Idea Phase	10
Project: Prototype Phase	15
Project: Evaluation and Communication Phase	15

Table: Grading criteria

Please see the detailed criteria at GDrive for how each phase are being graded. My website also contains research tips on how to conduct HCI research so it may prove to be useful.

# Main Textbook

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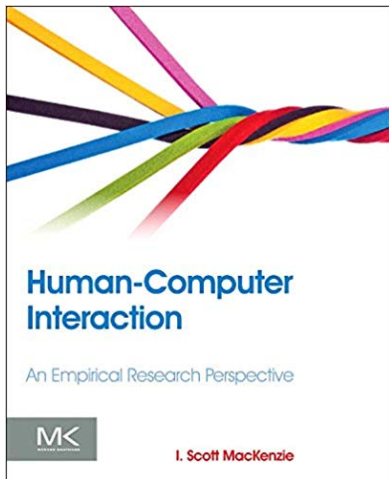
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Human Computer Interaction:  
An Empirical Research  
Perspective by I. Scott  
Mackenzie, 1st ed. (2013)

# Supplementary Textbooks

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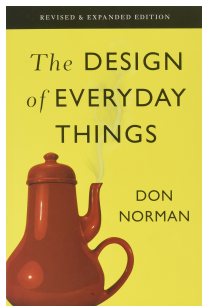
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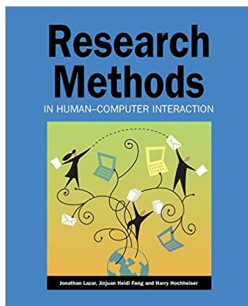
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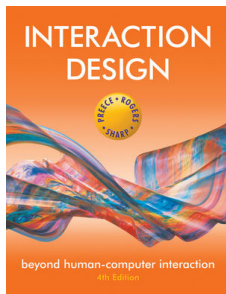
Textbooks



**Figure:** The Design of Everyday Things by Norman, Revised and Expanded ed. (2013)



**Figure:** Research Methods in Human-Computer Interaction by Lazar, 1st ed. (2010)



**Figure:** Interaction Design: Beyond Human Computer Interaction by Preece, Sharp and Rogers, 4th ed. (2015)

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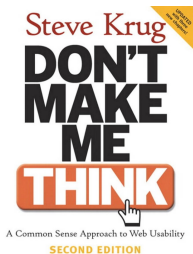


Figure: Don't Make Me Think by Krug, 2nd ed. (2006)

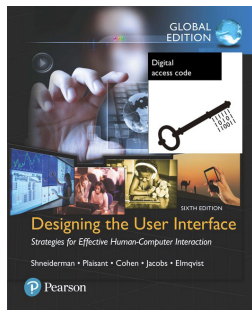


Figure: Designing the User Interface by Shneiderman et al., 6th ed. (2016)



# Coming Next

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Textbooks

- Mackenzie, Chapter 1, **History Context**, Human Computer Interaction: An Empirical Research Perspective, 1st ed. (2013)
- Shneiderman, **Direct Manipulation: A Step Beyond Programming Languages** (1983)
- Macintosh 128K,  
[https://en.wikipedia.org/wiki/Macintosh\\_128K](https://en.wikipedia.org/wiki/Macintosh_128K)

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# Questions