

HUMAN COMPUTER INTERACTIONS

Course Overview

This course teaches students to design user interfaces based on the capabilities of computer technology and the needs of human factors.

Expected Learning Outcomes

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

- Explain the capabilities of both humans and computers from the viewpoint of human information processing.
- Describe typical human–computer interaction (HCI) models and styles, as well as various historic HCI paradigms.
- Apply an interactive design process and universal design principles to designing HCI systems.
- Describe and use HCI design principles, standards and guidelines.
- Analyze and identify user models, user support, socio-organizational issues, and stakeholder requirements of HCI systems.
- Discuss tasks and dialogs of relevant HCI systems based on task analysis and dialog design.

Weekly Plan

Week	Content
Week 1	Introduction to HCI and UID
Week 2	Interaction Design
Week 3	Usability and User Experience
Week 4	CAT ONE
Week 5	Design Principles and Usability Heuristics
Week 6	Modelling users for proper product design
Week 7	Task Analysis and Evaluation
Week 8	UI Prototyping
Week 9	UI Project presentations
Week 10	Trends in User Interface Design and HCI
Week 11	CAT TWO

Week 12	Group Discussions
Week 13	Individual Revision
Week 14	Examinations

Modes of Delivery

- Lectures
- Theoretical and practical assignments
- Individual and group research and corresponding presentations

Instructional Materials and/or Equipment

- Design, prototyping and development tools

Assessment

A learner is assessed through:

- Continuous Assessment Tests and Assignments (30%)
- End of semester examination (70%)

Course and e- Textbooks

1. Sharp, H. Preece, J., and Rogers, Y. (2019). *Interaction design: Beyond human-computer interaction* (5th ed.) John Wiley & Sons Ltd. ISBN 978-1-119-54730-3. (referred to as *Interaction* in the study guide)
2. Dix, A., Finlay, J., Abowd, G., and Russell, B. Human-Computer Interaction. Prentice Hall. Third Edition. 2004. ISBN-10: 0130461091, ISBN-13: 978-0130461094.
3. Shneiderman, B., Plaisant, C., Cohen, M., Jacobs, S. Designing the User Interface: Strategies for Effective Human-Computer Interaction. Prentice Hall. Fifth Edition. 2009. ISBN-10: 0321537351, ISBN-13: 978-0321537355.

4. Preece, J., Rogers, Y., Sharp, H., Benyon, D., Holland, S., Carey, T. Human-Computer Interaction. Addison Wesley. 1994. ISBN-10: 0201627698, ISBN-13: 978-0201627695.

Reference Textbooks

1. Benyon, D., Turner, P., Turner, S. Designing Interactive Systems. Addison Wesley. 2005. ISBN-10: 0321116291, ISBN-13: 978-0321116291.
2. Norman, D. A. The Design of Everyday Things. Basic Books. 2002. ISBN-10: 0465067107, ISBN-13: 978-0465067107.
3. Jacko, J. A. The Human-Computer Interaction Handbook. CRC Press. 2012. ISBN: 9781439829431.

Course Journals

1. Journal of Human-Computer Interaction. Taylor & Francis. ISSN: 1044-7318.
2. Journal of Human Computer Studies. Elsevier. ISSN: 1071-5819.
3. ACM Transactions on Computer-Human Interaction (TOCHI). ISSN: 1073-0516.

Reference Journals

1. ACM Interactions. ISSN: 1072-5520.
2. ACM Communications. ISSN: 0001-0782.
3. Interacting with Computers. Oxford University Press. ISSN: 1873-7951.