# CSC 323: HUMAN COMPUTER INTERACTION

**ACADEMIC YEAR:** 2021/2022 **SEMESTER:** II

**LECTURER:** DORCUS ARSHLEY SHISOKA

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**DAY: WEDNESDAY TIME: 8 – 11 AM ROOM: ABB 007**

**AIM/PURPOSE:** The course aims at providing basic knowledge about concepts within the fields of human computer interaction and the psychology of the interaction process. Another purpose is to provide the students with tools for identifying factors affecting the communication between humans and computers in a positive and negative manner and to provide the design methods to improve that communication.

**PRE-REQUISITE**

CSC 215: Systems Analysis and Design

**COURSE HOURS PER WEEK**: 4

**EXPECTED LEARNING OUTCOMES**

Upon successful completion of this course, students should be able to:

1. Design, implement and evaluate effective and usable graphical computer interfaces.
2. Describe and apply core theories, models and methodologies from the field of HCI.
3. Describe and discuss current research in the field of HCI.
4. Implement simple graphical user interfaces using the Java Swing toolkit.
5. Describe special considerations in designing user interfaces for users with special needs.

**COURSE CONTENT**

| **Week** | **Activity** | **Assessment** |
| --- | --- | --- |
| 1 | * **Introduction to Human Computer Interaction** * Background issues, * Explain fundamental concepts in HCI; |  |
| 2 | * **Usability Principles and Paradigms** * Study the range of usability paradigms in use in HCI * Usability principles that inform HCI |  |
| 3 | * **The Design Process** * The difference between Software engineering and the design process for interactive systems * Standards and guidelines as design rules |  |
| 4 | * **Models of Systems** * Discuss the mental models employed in HCI Design * Convert a mental model into a conceptual model |  |
| 5 | * **Task Analysis** * Define Task Analysis * The steps of Task Analysis * Stages of HTA |  |
| 6 | * **CAT 1** |  |
| 7 | * **Dialogue Notation and Design** * The process of dialogue analysis * The differences between semantics and dialogue * The properties of dialogue notations |  |
| 8 | * **GUI Design and Programming** |  |
| 9 | * **Implementation Support** * data modelling |  |
| 10 | * **Help Facility & Documentation** |  |
| 11 | * **Evaluation Techniques** |  |
| 12 | * **Revision Exercises** |  |
| 13 and 14 | * **Examinations** |  |

**Mode of Delivery**

Lectures, Directed reading, Group/class discussions and Practical exercises

**Assessment**

Assignments, Tutorials, Tests, Practical exercises and Written examinations.

Written examination at end of Semester: 70%

Continuous Assessment: 30%

**Total 100%**

**Core References**

* Alan Dix et al, *Human-Computer Interaction*, Third Edition by Prentice Hall (2004)
* Rosson, M. and Carroll, J Usability Engineering: Scenario-Based Development of Human-Computer Interaction.
* Nielsen, J. Usability Engineering

**Approval**



**--------------------------------------------------------------- ------2/06/2022------------**

**Lecturer/Instructor Date**

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**COD Computer Science Date**