PHINMA EDUCATION
MAKING LIVES BETTER THROUGH EDUCATION

Course Code: ITE 291 – Human Computer Interaction
Module #1

Name:_____ Class number: _____
Section: _____ Schedule: _____ Date: _____

Lesson Title: Human Computer Interface Introduction

Lesson Objectives:

1) **I can recognize the importance of Human Computer Interaction.**
2) **I can find recognize the historical evolution of HCI**
3) **I can write my learning goals for this subject.**

Materials:
Student module.

References:
https://www.tutorialspoint.com/human_computer_interface/human_computer_interface_introduction.htm

Productivity Tip:
An investment in knowledge pays the best interest. – Benjamin Franklin.
If you have any questions please ask your instructor for help.

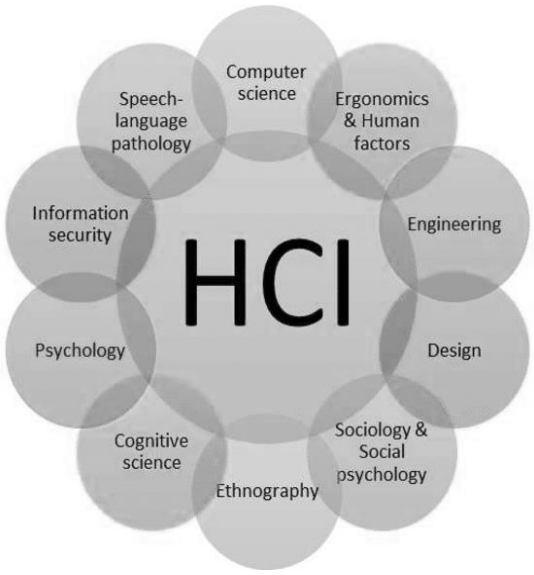
A. LESSON PREVIEW

1) Introduction (2 mins)

Human Computer Interface (HCI) was previously known as the man-machine studies or man-machine interaction. It deals with the design, execution and assessment of computer systems and related phenomenon that are for human use.

HCI can be used in all disciplines wherever there is a possibility of computer installation. Some of the areas where HCI can be implemented with distinctive importance are mentioned below −

- Computer Science − For application design and engineering.
- Psychology − For application of theories and analytical purpose.
- Sociology − For interaction between technology and organization.
- Industrial Design − For interactive products like mobile phones, microwave oven, etc.



The world's leading organization in HCI is ACM − SIGCHI, which stands for Association for Computer Machinery − Special Interest Group on Computer–Human Interaction. SIGCHI defines Computer Science to be the core discipline of HCI. In India, it emerged as an interaction proposal, mostly based in the field of Design.

2) Activity 1: What I Know Chart, part 1 (3 mins)

What I Know	Questions:
was previously known as the ma 1.computer science 2.sociologgy 3.industrial design	ctives of this course? l milestones in HCI?

was previously known as the man-machine studies or man-machine interaction. It deals with the design, execution and assessment of computer systems and related phenomenon that are for human use

Visual Display Unit (1950s),Development of the Sketchpad (1962),Computer Supported Cooperative Work (1990 s),The idea of metaphor,WWW (1989)

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B.MAIN LESSON

1) Activity 2: Content Notes (13 mins)

Historical Evolution

From the initial computers performing batch processing to the user-centric design, there were several milestones which are mentioned below −

- Early computer (e.g. ENIAC, 1946) − Improvement in the H/W technology brought massive increase in computing power. People started thinking on innovative ideas.
- Visual Display Unit (1950s) − SAGE (semi-automatic ground environment), an air defense system of the USA used the earliest version of VDU.
- Development of the Sketchpad (1962) − Ivan Sutherland developed Sketchpad and proved that computer can be used for more than data processing.
- Douglas Engelbart introduced the idea of programming toolkits (1963) − Smaller systems created larger systems and components.
- Introduction of Word Processor, Mouse (1968) − Design of NLS (oNLine System).
- Introduction of personal computer Dynabook (1970s) − Developed *smalltalk* at Xerox PARC.
- Windows and WIMP interfaces − Simultaneous jobs at one desktop, switching between work and screens, sequential interaction.
- The idea of metaphor − Xerox star and alto were the first systems to use the concept of metaphors, which led to spontaneity of the interface.
- Direct Manipulation introduced by Ben Shneiderman (1982) − First used in Apple Mac PC (1984) that reduced the chances for syntactic errors.
- Vannevar Bush introduced Hypertext (1945) − To denote the non-linear structure of text.
- Multimodality (late 1980s).
- Computer Supported Cooperative Work (1990's) − Computer mediated communication.
- WWW (1989) − The first graphical browser (Mosaic) came in 1993.
- Ubiquitous Computing − Currently the most active research area in HCI. Sensor based/context aware computing also known as pervasive computing.

ITE 292 Topics:

Day #	Topic
Day 1	Human Computer Interface Introduction
Day 2	Introduction to Design Process
Day 3	HCI Design in Software
Day 4	The Design Elements I
Day 5	The Design Elements II
Day 6	Task Centered Design
Day 7	User - Centered Design
Day 8	Concept of Prototyping
Day 9	Period 1 Exam
Day 10	Goals of Evaluation
Day 11	Conceptual Model
Day 12	Methods of Evaluation I
Day 13	Methods of Evaluation II
Day 14	Different Measures of Evaluation
Day 15	User Interfaces Standards
Day 16	Beyond Screen Design

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Day 17	Period 2 Exam
Day 18	Accommodating Human Diversity
Day 19	Usability Heuristics
Day 20	HCI Patterns
Day 21	Design Standards
Day 22	Past and Future of HCI
Day 23	Ubiquitous Computing
Day 24	Information Visualization
Day 25	Interacting with Data and Information
Day 26	Period 3 Exam

Core objectives of the course:

- Understand best practices and standards and their applications
- Identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems
- Design, implement, and evaluate computer-based systems, processes, components, or programs to meet desired needs and requirements under various constraints
- Integrate IT-based solutions into the user environment effectively
- Apply knowledge through the use of current techniques, skills, tools and practices necessary for the IT profession
- Assist in the creation of an effective IT project plan
- Communicate effectively with the computing community and with society at large about complex computing activities through logical writing, presentations, and clear instructions

Platforms:

Introduce the platforms that will be used to facilitate communication in the class

- Facebook Group
- Messenger GC
- Google Classroom

2) Activity 3: Skill-building Activities (with answer key) (18 mins + 2 mins checking)

Exercise 1: Writing you learning goals for this course

Instruction: Write at three (3) learning goals that you plan to accomplish in the course.

1. learn about this subject and apply it for my job and personal matters
2. apply what are the thing that I learn about this subject to my job and making new technology
3. adopt the new and improve new technology that we all making that I apply from the beggining

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3) Activity 4: What I Know Chart, part 2 (2 mins)
What you have learned in this lesson?

_____
_____
_____
_____
_____

4) Activity 5: Check for Understanding (5 mins)
Summative Test: Multiple Choices
. **Instruction:** Write the letter of the best answer on the space provided.

A ____ 1) HCI was also known as?
A. Man-machine interaction
B. User-machine interaction
C. AI interaction
D. Computer user interaction

A _____ 2) Which of the following historical milestone exist first?
A. Word processors
B. SAGE
C. Metaphor
D. WWW

C _____ 3) What year personal computer dynamic was developed?
A. 1950s
B. 1960s
C. 1970s
D. 1980s

A _____ 4) What is the name of the first graphical browser
A. www
B. google chrome
C. Mozilla firefox
D. Mosaic

D _____ 5) How many topics are covered in this subject?
A. 30
B. 23
C. 20
D. 25

C. LESSON WRAP-UP

1) Activity 6: Thinking about Learning (5 mins)
a) Mark your place in the work tracker which is simply a visual to help you track how much work you have accomplished and how much work there is left to do.

You are done with the session! Let's track your progress.

Period 1											Period 2											Period 3								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

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b) Think about your learning by filling up "My Learning Tracker". Write the learning targets, scores, learning experience for the session and deliberately plan for the next session.

Date	Learning Target/Topic	Scores	Action Plan
What's the date today?	*What module# did you do? What were the learning targets? What activities did you do?*	*What were your scores in the activities?*	*What contributed to the quality of your performance today? What will you do next session to maintain your performance or improve it?*

FAQs

1. What are the advantages of HCI?
   The main advantages of HCI are simplicity, ease of deployment & operations and cost savings – for smaller set-ups. By using HCI you have fewer systems to manage. The hyper-converged clouds reduce the time required to deploy many applications. They also reduce solution design time and integration complexity.
2. What is the role of human computer interaction?
   In summary, HCI focuses on increasing user effectiveness and improving user computer experiences with organizational systems. It does so by enhancing the user interface through an understanding of the tasks and organizational contexts in which HCI occurs.