



DCIT302: HUMAN-COMPUTER INTERACTION

COURSE SYLLABUS

INSTRUCTOR

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SPMS

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Course Overview:

Human-Computer Interaction (HCI) focuses on designing interactions between human activities and the computational systems that support them and constructing interfaces to facilitate these interactions. This course will cover various aspects of HCI, from user psychology and cognitive science to web-based user interfaces, and explore user interface design, development, and programming principles.

Course Goal:

The main goal of this course is to provide students with a comprehensive understanding of HCI principles and equip them with the skills to design, develop, and evaluate user interfaces in various contexts.

Course Objectives:

1. Understand the fundamentals of HCI, including user psychology, cognitive science, and interaction design principles.
2. Learn about various interface design elements, such as menus, command languages, icons, and windows.
3. Explore the development and programming of graphical and web and mobile-based user interfaces.
4. Apply concepts of user-centered design, testing, and evaluation to real-world projects.
5. Examine emerging technologies and trends in HCI.

Expected Outcomes:

Upon completion of this course, students will be able to:

1. Analyze user needs and develop suitable interaction designs.
2. Design and implement user interfaces using various design elements.
3. Evaluate the usability of software interfaces through quantitative and qualitative methods.
4. Apply user-centered design and testing principles in their work.
5. Keep up with emerging technologies in the field of HCI.

Mode of Delivery:

The course will run throughout the semester and will be delivered by a lecturer leading students to discuss the topics. Students' own research will be encouraged. Due to the varied nature of the issues, subject matter experts will be invited to lead some discussions.

COURSE DELIVERY SCHEDULE

Week 1: Introduction to HCI & UI/UX Design

- Understanding the basics of UI and UX design
- Design Thinking Process
- Principles of user interface design
- Introduction to Figma as a design tool
- Understanding the design process

Week 2: User Research and Personas

- Conducting user research to inform design decisions
- Creating user personas based on research
- Defining user goals and user stories

Week 3: UI Design with Figma I

- Design Thinking Process
- Creating low-fidelity wireframes for websites and apps
- Creating Style Guides and Layout Grids
- Visual Hierarchy and Design Layouts
- How to gather inspiration for Projects/ Creation of Mood Boards
- Competitive Analysis
- Understanding the importance of usability testing

Week 4: UI Design with Figma II

- Components Design
- Responsive Design and Autolayouts
- Designing for Web Interfaces
- Designing for Mobile Interfaces

Week 5: Prototyping with Figma

- Understand the basic concepts of prototyping with Figma.

Week 6: Advanced Prototyping with Figma

- Prototyping for Mobile Platforms
- Prototyping for Web platforms
- User Testing with Prototypes

Weeks 7-10: Completion of Semester Project and Presentations

Reading List

Recommended reading materials

- "The Design of Everyday Things" by Don Norman
- "Alignment Principles" by 254-online.com
- "Visual Design Principles" by Balsamiq
- "Designing Interfaces" by Jenifer Tidwell
- "Interaction Design: Beyond Human-Computer Interaction" by Helen Sharp, Yvonne Rogers, and Jenny Preece (Chapter 1)