This course will dive into the fundamentals of how man machine interaction happens and the principles behind that. We will also look at how HCI relates to other fields like user experience design, user interface design, human factors engineering, and psychology. We will learn the three different roles of a user in interface design namely the ‘processor’ view, the ‘predictor’ view, and the ‘participant’ view. The course will cover human capabilities, design principles and models, prototyping and evaluation techniques. Emphasis will be given on learning and developing prototypes of various software modules, products etc., Deliverables include short programming assignments and a semester-long group project.

Course Outcomes
The student will be able to comprehend:
• The overall goals of human-computer interaction.
• The relationship between HCI, user experience design, human factors engineering, and psychology.
• The emerging ideas in HCI research, such as context-sensitive computing, gesture-based interaction, and social computing.
• The feedback cycle in user interaction, including gulf of execution and evaluation.
• Various Interaction design principles and heuristics in user interface design.

Course Content:
• Introduction to HCI: basic terminology, history,
• Interactive System design: concepts of usability engineering, Graphical user interface design and aesthetics,
• Model based design: Keystroke model, GOMS, human factors models
• Task Modeling and Analysis
• Prototyping: Low and high fidelity prototyping techniques
• Evaluating prototypes: Principles and guidelines
• Cognitive Architecture: Human processor model, experimental cognitive psychology

Reference Books:


HCI foundation and history; Usability life cycle and methods; Rapid Prototyping Visual and informational Design: guidelines, Thirteen principles of display design [Perceptual principles, Mental model principles, Principles based on attention, Memory principles].

Grading policy:
Assignments: 20%
Mid Sem Exam: 20%
Project : 30%
End Sem Exam: 30%

Modalities of content delivery :
• As per the course conduct prescribed, the course will follow an online mode of teaching.
• However when and where required, offline recorded lectures may be uploaded to an appropriate LMS platform (either Google classroom or Moodle)
• Assignments and other topics related to course will be uploaded, shared on an LMS platform (either Google classroom or Moodle)
• No major deviations expected from the conduct provided.