CIS 375 – Human-Computer Interaction

Course Description

This course presents students with user-centered methodologies in the development, evaluation, and deployment of information technology applications and systems. Students are exposed to evolving technologies and devices, and how to design interactive products that enhance the way people communicate, interact, and work with computers. Topics include human-computer interaction, user and task analysis, human factors, ergonomics, accessibility standards, and cognitive psychology.

Instructional Materials

Rogers, Y., Sharp, H., and Preece, J. (2011). *Interaction design* (3rd ed.). Chichester, U.K.: Wiley.

Course Learning Outcomes

1. Describe the relationship between the cognitive principles and their application to interfaces and products.
2. Explain the conceptual terms for analyzing human interaction with affordance, conceptual models, and feedback.
3. Construct evaluation techniques to the user experience and system usability in the design process.
4. Explain the importance of user abilities and characteristics in the usability of products.
5. Compare and contrast the different types of interactive environments.
6. Describe the differences in developing user interfaces for different application environments.
7. Compare and contrast the various cognitive models.
8. List the general principles used in the heuristic evaluation of a user interface design.
9. Create a simple usability evaluation for an existing software application or product.
10. Describe common usability guidelines and standards.
11. Define the different types of interaction styles.
12. Demonstrate the ability to select an appropriate user interface interaction style for a particular task.
13. Explain the characteristics of human-centered design methods.
14. Create a product evaluation through a formal framework.
15. Describe, in scenario form, a problem situation to be addressed by a new or redesigned product.
16. Evaluate the ethical concerns inherent in human-computer interaction and how these concerns affect organizational policies.
17. Explain the different usability data-gathering techniques.
18. Use technology and information resources to research issues in human-computer interaction.
19. Write clearly and concisely about human-computer interaction topics using proper writing mechanics and technical style conventions.