

SYLLABUS

DATE OF LAST REVIEW:	02/2013
CIP CODE:	15.1204
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Human Factors in Computer Systems
COURSE NUMBER:	CIST-0178
CREDIT HOURS:	3
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	913-334-1100
EMAIL:	<i>KCKCC issued email accounts are the official means for electronically communicating with our students.</i>
PREREQUISITE(S):	CIST-0101 Computer Concepts and Applications or CIST-0111 Microcomputer Business Software

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, <http://www.kckccbookstore.com/>, for the required texts for your particular class.

COURSE DESCRIPTION:

This course examines the application of human factors when designing and using information systems. Topics covered include history, development, and current state of human-computer interface development. Additional areas of study include psychology, engineering, and physiology and their influence on the development of ergonomics.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Define Human Computer Interaction (HCI).
- II. List the components of HCI.
- III. Identify the human issues involved in HCI.
- IV. Identify the technological issues involved in HCI.
- V. Identify the methods and techniques employed within interaction design.
- VI. Identify the support needed for designers working on an interaction design project.
- VII. Evaluate HCI projects.

EXPECTED LEARNER OUTCOMES:

- A. Upon completion of the course, the student will be able to define Human Computer Interaction (HCI).
- B. Upon completion of the course, the student will be able to list the components of HCI.
- C. Upon completion of the course, the student will be able to identify the human issues involved in HCI.
- D. Upon completion of the course, the student will be able to identify the technological issues involved in HCI.
- E. Upon completion of the course, the student will be able to identify the methods and techniques employed within interaction design.
- F. Upon completion of the course, the student will have a clear understanding of the support needed for designers working on an interaction design project.
- G. Upon completion of the course, the student will be able to evaluate HCI projects.

COURSE COMPETENCIES:

Upon completion of the course, the student will be able to define Human Computer Interaction (HCI).

1. The student will be able to identify different design needs.
2. The student will be able to identify the challenges and goals of HCI.
3. The student will have a thorough understanding of the evolution of HCI as well as the importance of HCI.

Upon completion of the course, the student will be able to list the components of HCI.

4. The student will be able to identify the disciplines used by HCI.

Upon completion of the course, the student will be able to identify the human issues involved in HCI.

5. The student will be able to identify the four stages of the human information processing model.
6. The student will have a thorough understanding of the perception and representation considerations required by HCI.
7. The student will have a thorough understanding of the attention and memory constraints that must be considered with respect to HCI.
8. The student will be able to identify the differences between knowledge representation and knowledge structures.
9. The student will complete exercises designed to apply the concept of mental models to interface design.
10. The student will have a thorough understanding of interface metaphors and conceptual models.
11. The student will be able to identify the different ways in which people learn.
12. The student will be able to provide input beneficial to helping people learn how to employ a computer system.
13. The student will have a thorough understanding of Computer-Supported Cooperative Work (CSCW).
14. The student will be able to identify organizational aspects, which have a bearing on HCI.

Upon completion of the course, the student will be able to identify the technological issues involved in HCI.

15. The student will have a thorough understanding of different input devices and how they should be incorporated with respect to different design needs.
16. The student will be able to identify different interaction styles.
17. The student will be able to identify general issues associated with designing windowing systems.
18. The student will be able to identify basic window components.
19. The student will complete exercises designed to emphasize the importance of user support and employing on-line information to aid in user support.

Upon completion of the course, the student will be able to identify the methods and techniques employed within interaction design.

20. The student will be able to identify the fundamental principles of user-centered design.
21. The student will have a thorough understanding of the soft systems methodology.
22. The student will be able to identify functional requirements, data requirements, and usability requirements in association with interaction design.
23. The student will have a thorough understanding of task analysis.
24. The student will have a thorough understanding of the framework for design.
25. The student will be able to identify different ways in which a design may be envisioned.

Upon completion of the course, the student will have a clear understanding of the support needed for designers working on an interaction design project.

26. The student will have a thorough understanding of the support needed during the design process.
 27. The student will have a thorough understanding of the principles and rules associated with interaction design and the support needed for designers.
 28. The student will be able to identify software standards and HCI standards.
 29. The student will have a thorough understanding of design rationale.
 30. The student will be able to identify prototyping techniques and software prototyping tools.
 31. The student will have a thorough understanding of the software support needed when designing a user interface.
 32. The student will be able to identify stand-alone tools, which may be utilized for software support.
- Upon completion of the course, the student will be able to evaluate HCI projects.*
33. The student will be able to identify the role evaluation plays in interaction design.
 34. The student will have a thorough understanding of the importance of observations, monitoring, and users' opinions.
 35. The student will have a thorough understanding of experiments and benchmarking, which may be used during the evaluation process.
 36. The student will have a thorough understanding of interpretive evaluations.
 37. The student will have a thorough understanding of predictive evaluations.
 38. The student will be able to compare the different methods of evaluations.

ASSESSMENT OF LEARNER OUTCOMES:

Assessment methods may include, but are not limited to, the following: Homework, Assignments, Quizzes, Class Participation, Chapter Tests, and Final Exam. The grading scale and the process for calculating the course grades are to be determined by the individual instructors. This information will be included in each instructor's syllabus.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center at 913-288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.