New Course Request

Indiana University

Indianapolis Campus

Check Appropriate Boxes: Undergraduate credit ☑ Graduate credit ☐ Professional credit ☐

1. School/Division Informatics

2. Academic Subject Code INFO-1

3. Course Number 275 (must be cleared with University Enrollment Services)

4. Instructor MacDorman

5. Course Title Introduction to Human-Computer Interaction Theory

Recommended Abbreviation (Optional) Intro to HCI Theory

(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Fall 2009

7. Credit Hours: Fixed at 3 or Variable from ________ to ________

8. Is this course to be graded S-F (only)? Yes ☐ No ☑

9. Is variable title approval being requested? Yes ☐ No ☑

10. Course description (not to exceed 50 words) for Bulletin publication: Students will learn the fundamental theories of human-computer interaction (HCI) and user-centered design. This course is both a survey of HCI research and an introduction to the psychological, behavioral, and other social science knowledge and techniques relevant to the design of interactive and ubiquitous computing systems.

11. Lecture Contact Hours: Fixed at 3 or Variable from ________ to ________

12. Non-Lecture Contact Hours: Fixed at 0 or Variable from ________ to ________

13. Estimated enrollment: 15-20 of which 0 percent are expected to be graduate students.

14. Frequency of scheduling: once yearly

15. Will this course be required for majors? no

16. Justification for new course: developing coursework for online certificate in HCI

17. Are the necessary reading materials currently available in the appropriate library? yes

18. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

19. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by: [Signature] Date 3/20/09

Dean of Graduate School (when required) [Signature] Date

Approved by: [Signature] Date 3/20/09

Chancellor/Vice-President [Signature] Date

University Enrollment Services [Signature] Date

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

UPS 724 University Enrollment Services Final—White: Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
Introduction to Human-Computer Interaction Theory
Indiana University School of Informatics - IUPUI

Course Info: 3 Credit Hours | Web Only | 0000 | On-Line

Instructor Info: Name:

Contact Info:

Office Hours:

COURSE DESCRIPTION
Students will learn the fundamental theories of human-computer interaction (HCI) and user-centered design. This course is both a survey of HCI research and an introduction to the psychological, behavioral, and other social science knowledge and techniques relevant to the design of interactive and ubiquitous computing systems.

REQUIRED TEXTBOOK
- Cyberpsychology: An Introduction to Human-Computer Interaction
  - Author: Kent L. Norman
  - Cambridge Press, 2008
- Human-Computer Interaction, 3rd Ed.
  - Authors: Alan Dix, Janet E. Finlay, Gregory D. Abowd, Russell Beale
  - Prentice Hall, 2003
  - ISBN-10: 0130461091 / 978-0130461094

STATEMENT OF VALUES
- The Mission of IUPUI is to provide for its constituents excellence in Teaching and Learning, Research, Scholarship, Creative Activity, and Civic Engagement. With each of these core activities characterized by: 1) collaboration within and across disciplines and with the community, a commitment to ensuring diversity, and 3) pursuit of best practices. IUPUI’s mission is derived from and aligned with the principal components – Communities of Learning, Responsibilities of Excellence, Accountability and Best Practices – of Indiana University’s Strategic Directions Charter. IUPUI values the commitment of students to learning; of faculty to the highest standards of teaching, scholarship, and service; and of staff to the highest standards of service. IUPUI recognizes students as partners in learning.
- IUPUI values the opportunities afforded by its location in Indiana’s capital city and is committed to serving the needs of its community. Thus, IUPUI students, faculty, and staff are involved in the community, both to provide educational programs and patient care and to apply learning to community needs through service. As a leader in fostering collaborative relationships, IUPUI values collegiality, cooperation, creativity, innovation, and entrepreneurship, as well as honesty, integrity, and support for open inquiry and dissemination of findings. IUPUI is committed to the personal and professional development of its students, faculty, and staff and to continuous improvement of its programs and services.
COURSE OUTCOMES
1. To familiarize students with the theoretical underpinnings of the field of human-computer interaction.
2. To familiarize students with some of the basic human and computer-related factors that influence the design and development of interactive computing systems.
3. To familiarize students with current theory and research on the psychological factors to be considered in designing interactive computing systems.
4. To explore the interrelationships between psychological processes and the characteristics of computing systems being designed for human or societal use, e.g., interpersonal and cross-cultural computer-mediated communication.
5. Based on point three above, to develop an appreciation of the ways in which theory and research can guide human-computer interaction design and in which design experience can contribute to the development of theory and research.

SPECIAL NOTE TO ONLINE STUDENTS
1. For students who are taking this course online, it is important to note that you are receiving the same content as in-class students, with minor variations in content delivery.
2. Because you will not be present during the weekly class discussions and lectures, you will be required to participate in the online forum and listen to the pre-taped lectures using Breeze or other media outlined by the instructor.
3. All due dates and requirements related to weekly reading, forum questions, quizzes, and projects are exactly the same as those in-class students.
4. Throughout the descriptions and explanations of course requirements outlined below, the instructor regularly refers to the class time (6 p.m. or other times) as the cut-off or due date and time for quizzes, assignments, etc. These due dates and times also apply to online students, even though you are not required to attend class at that time.

COURSE TEXT, READING, and CLASS DISCUSSIONS, QUIZZES, PROJECTS
Assessing Your Comprehension of the Weekly Reading
We will cover approximately one chapter per week from the course texts. Each student should not only read but arrive at a competent understanding of the materials. Three measures will be used to assess learning competency from the weekly readings:

- Weekly quizzes will be given to assess learning and comprehension.
- Weekly discussions, directed by specific questions, will be given in an open class discussion format, either in class or in an online forum. During this time the instructor will challenge student comprehension, while adding practical applications to the theoretical content.
- A final paper and/or project report will be assigned in which students will summarize and integrate theories and project assignments from the semester-long reading assignments.

Supplemental Reading
At times, there are students who desire a greater depth of content (theory/application) pertaining to certain subjects covered throughout the semester, because this HCI foundation course only provides a basic overview of the discipline. As a result, if any student(s) would like supplemental reading in addition to the weekly assigned reading, please let the instructor know the week prior to the assigned reading week. Once the class convenes for its weekly discussion time, that student(s) who requested the supplemental reading will be given a chance to integrate the relevant portions from his/her reading into the discussion. Although supplemental reading assignments can add depth and richness to the weekly discussions, they are not required due to the limitation of time and knowledge level of students who are new to HCI.
POLICIES for ATTENDANCE & ASSIGNMENT/PROJECT DEADLINES

1. Missing class WILL impact your grade. (For in-class students only.) Students are allowed two (excused or unexcused) absences before their grade will be effected. In other words, whether you are sick or have personal problems or issues for missing class, it will amount to the same. Missing class means you do not show for the whole or majority of the session. The grade reduction policy works in this way.
   - On the third missed class time your final grade will drop 5 points (regardless of the reason).
   - On the fourth missed class your final grade will drop 10 points (regardless of the reason), and 5 additional points thereafter for each additional class missed.

2. Responsible for due dates and related materials: All weekly due assignments are each student’s responsibility. If class is missed, the student is still responsible for the assignment, as well as to find out what was covered in class, e.g., any new assignments or variations to an existing assignment. ALL assignment deadlines are outlined in the syllabus or syllabus supplemental documents provided on OnCourse. Ultimately, each student is responsible for the deadline. Also, weekly assignment deadlines should be adhered to, to insure fairness to all students. For the purpose of maintaining an equal and fair evaluation of each student’s work, no student will receive special treatment. As a result, the following rules will apply to this course:
   - All assignments must be submitted through OnCourse at the designated time as stated on the assignment sheet, as communicated via email, or on the syllabus.
   - All assignments (projects) handed in late will be reduced 10 points for every day late (24 hrs. from the due date and time). For example, if the assignment is due at 6PM on the due date and it is post-marked 6:01PM, it will be reduced automatically by 10 points. If the class meets in the class room, students must be ready to hand the assignment in at the start of class time.
   - Incompletes will NOT be issued except under very extreme personal conditions that have been reviewed by the instructor and in some cases in consultation with the Dean’s Office.

UNIVERSITY POLICIES (* Does not apply to online students.)

1. University Attendance Policy:* Attendance is required. The University regulations state: “Students are expected to be present for every meeting of the classes in which they are enrolled.” IUPUI faculty are required to submit to the office of the Registrar a record of student attendance through the semester, on which they will take action if the record conveys a trend of absenteeism. As a result, ATTENDANCE WILL BE TAKEN IN ALL CLASSES. An attendance sheet will be passed out in class for each student to sign their name. If you do not sign your name while in class you will be marked absent. The instructor is not expected to remember who attended when, so signing the sheet while in class is important. Signing the attendance sheet for another student is absolutely prohibited. Any student found doing so will be in violation of university policies on ethics and/or conduct.

2. Bringing your children to class: * University Policy states that: “Children are not permitted to attend class with parents, guardians, or childcare providers. This conduct has the effect of unreasonably interfering with an individual’s work or academic performance creating an offensive learning environment.” “A student must not violate course rules as contained in a course syllabus, which are rationally related to the content of the course or to the enhancement of the learning process in the course.” [Code of Student Rights, Responsibilities, and Conduct, page 29]

3. Academic Dishonesty / Integrity / Plagiarism: Using another student’s work on a project or assignment, cheating on a test, or any other form of dishonesty or plagiarism will result in a grade of zero on that assignment and possibly an "F" in the course, and will be referred to the Dean of Students. All students should aspire to high standards of academic honesty. This class encourages cooperation and the exchange of ideas. For further reference, students may see: http://life.iupui.edu/dos/code.htm

4. Values and ethics: Profanity or derogatory comments about or towards the instructor or any member of the class will NOT be tolerated. Violating this rule will result in a warning and if the offense continues, administrative action will be taken.

5. Code of Student Rights, Responsibilities and Conduct: All students are responsible for reading, understanding, and applying the Code of Student Rights, Responsibilities and Conduct of IUPUI. (Students can access www.iupui.edu/code for further information regarding the above points.)

6. Disabilities Policy: In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to "reasonable accommodations." Please notify the instructor during the first week of class of any accommodations needed for the course. Students with learning disabilities must provide written verification for this policy to be recognized.
## Weekly Schedule & Information

<table>
<thead>
<tr>
<th>Wks</th>
<th>Quiz # &amp; Chapter Covered</th>
<th>Quarterly Project Schedule</th>
<th>Weekly Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>---</td>
<td></td>
<td>Read syllabus and explain course projects</td>
</tr>
<tr>
<td>2</td>
<td>Quiz 1: KN: Ch 1</td>
<td></td>
<td>Importance, Implications, and Historical Perspectives of HCI</td>
</tr>
<tr>
<td>3</td>
<td>Quiz 2: KN: Ch 2</td>
<td></td>
<td>Fundamentals of Humans and Technology (similarities and differences)</td>
</tr>
<tr>
<td>4</td>
<td>Quiz 3: KN: Ch 3</td>
<td>Project 1</td>
<td>Theoretical Approaches: Models and Metaphors</td>
</tr>
<tr>
<td>5</td>
<td>Quiz 4: KN: Ch 6</td>
<td></td>
<td>Learning and Memory, Transfer and Interference</td>
</tr>
<tr>
<td>6</td>
<td>Quiz 5: KN: Ch 7</td>
<td></td>
<td>Psychology of HCI: Thinking and Problem Solving</td>
</tr>
<tr>
<td>7</td>
<td>Quiz 6: KN: Ch 9</td>
<td></td>
<td>Individual Differences in HCI: People, Performance, and Personality</td>
</tr>
<tr>
<td>8</td>
<td>Quiz 7: KN: Ch 10</td>
<td>Project 2</td>
<td>Motivation and Emotion at the Human–Computer Interface</td>
</tr>
<tr>
<td>9</td>
<td>Quiz 8: KN: Ch 11</td>
<td></td>
<td>Interpersonal Relations: Social Computing and Group Processes</td>
</tr>
<tr>
<td>10</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
</tr>
<tr>
<td>11</td>
<td>Quiz 9: KN: Ch 13-14</td>
<td></td>
<td>Automation and Artificial Intelligence and Augmentive Technologies</td>
</tr>
<tr>
<td>12</td>
<td>Quiz 10: KN: Ch 15-16</td>
<td></td>
<td>Media Interaction Design and the Future of the Ultimate Human–Computer Interface</td>
</tr>
<tr>
<td>13</td>
<td>Quiz 11: AD: Ch 4</td>
<td>Project 3</td>
<td>Usability Paradigms and Principles</td>
</tr>
<tr>
<td>14</td>
<td>Quiz 12: AD: Ch 5</td>
<td></td>
<td>The Interaction Design Process</td>
</tr>
<tr>
<td>15</td>
<td>Quiz 13: AD: Ch 6</td>
<td></td>
<td>Models of the User in Design</td>
</tr>
<tr>
<td>16</td>
<td>NONE</td>
<td>Project 4</td>
<td>Work on final project</td>
</tr>
<tr>
<td>17</td>
<td>NONE</td>
<td>Project 4</td>
<td>Final Project Due</td>
</tr>
</tbody>
</table>