

INFO-H 561

Meaning and Form in HCI (Human-Computer Interaction 2)

Department of Human-Centered Computing

Indiana University School of Informatics and Computing - Indianapolis

Spring 2019 / Section 24785 (on-line) / Credit Hours: 3

Prerequisite: INFO-H 541
Start Date: Monday, January 7
Canvas site: <https://iu.instructure.com/courses/1786362>
Instructor: Mark Larew, PhD, Professor of Practice
Office: WK 116 – Walker Plaza, 719 Indiana Avenue, Indianapolis, IN 46202
Office Hours: By appointment - Tuesday 3:00-5:00 pm or Wednesday 3:00-5:00 pm
Office Phone: 317-278-4141
Email: Canvas email (preferred) or mlarew@iupui.edu
Teaching Assistants: TBD (contact via Canvas)

COURSE DESCRIPTION

H561 builds upon the basics of human-computer interaction (HCI), user experience (UX), and design techniques to help students develop expertise in formative design research methods and generative design research methods. Formative research methods are focused on collection and analysis of data to understand and frame a problem space. Generative design methods are focused on creating potential design solutions that can be evaluated to determine how well they address the problem space. The course will emphasize the use of research methods to provide justification of design effectiveness.

COURSE READINGS

Textbooks**

Title: Observing the User Experience: A Practitioner's Guide to User Research, Second Edition

Authors: Elizabeth Goodman, Mike Kuniavsky, and Andrea Moed

Copyright: 2012 ISBN: 978-0-12-384869-7

Publisher: Morgan Kaufmann

IU Library Link: <https://iucat.iu.edu/catalog/14696984>

Publisher's Companion Website: <https://booksite.elsevier.com/9780123848697/>

Title: Contextual Design – Second Edition: Design for Life

Authors: Karen Holtzblatt and Hugh Beyer

Copyright: 2017 ISBN: 978-0-12-800894-2

Publisher: Morgan Kaufmann

IUPUI Library Link: <https://iucat.iu.edu/catalog/16855690>

Publisher's Companion Website: <http://booksite.elsevier.com/9780128008942/>

**** These books are available in e-book format via the IUPUI Library web site. Contact the course instructor if you are not able to locate the books. ****

Additional Reference Books (also available as e-books via IUPUI Library website):

Title: Universal Methods in Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions

Authors: Bella Martin and Bruce Hannington

Copyright: 2012

Publisher: Rockport Publishers

IU Library Link: <https://iucats.iu.edu/catalog/15336349>

Title: The UX Book

Authors: Rex Hartson and Pardha Pyla

Copyright: 2012

Publisher: Morgan Kaufmann

IU Library Link: <https://iucats.iu.edu/catalog/16832653>

****Additional readings for the course will be available via links or PDF files on Canvas.****

COURSE OBJECTIVES AND LEARNING OUTCOMES

Each student will acquire knowledge and practice skills to allow them to:

1. Describe the purpose of formative and generative design research methods for the design of interactive systems.
2. Describe the formative methods of surveys, interviews, observations, contextual interviews, diary studies and cultural probes.
3. Conduct formative design research to collect data relevant to understanding user requirements, problem spaces and design opportunities for an interactive system.
4. Analyze formative design research data and create affinity diagrams, personas, work/activity models and user experience maps to summarize the data.
5. Describe the generative design research methods of visioning, storyboarding, conceptual modeling and low-fidelity prototyping.
6. Use generative design methods to create and refine design concepts for interactive systems.
7. Conduct an evaluation of prototypes that incorporate a design concept in order to obtain user feedback relevant to evaluation of the effectiveness of the concept as a solution for the target problem space.

EXPECTATIONS, GUIDELINES, AND POLICIES

Participation:

A basic requirement of this course is that you will participate in online course discussions as directed and conscientiously complete required course activities and assignments. The instructor is required to submit to the Registrar a record of student participation and action will be taken if the record conveys a trend of non-participation. Non-participation must be explained with the submission of appropriate documentation to the satisfaction of the instructor, who will decide whether missed work may be made up. Non-participation that does not satisfy the above criteria is considered unexcused. To protect your privacy, doctor's excuses should exclude the nature of the condition and focus instead on how the condition impacts your attendance and academic performance.

Non-participation will reduce your grade through the following grade reduction policy:

- Discussion point assignments for weekly reading assignments and instructor presentations (as noted in the course schedule) are assigned for 9 of the weeks in the semester. You are allowed one excused or unexcused week of delayed participation with no grade reduction, with weeks (Week 1, Week 2, etc.) defined in the course schedule. Additional failures to post a discussion point by the due date, unless excused, will result in a score of 0 for the discussion point.
- Scores for deliverables other than discussion points submitted after the due date will be reduced as described below unless an explanation for non-participation is accepted by the instructor as described above as an excuse for non-participation.

Reduction in Score for Submissions of Deliverables after the Due Date:

Each student is responsible for completing each project deliverable by the posted due date and submitting it by the specified method. Due dates are outlined in the syllabus or in supplementary documents posted on Canvas. In fairness to the instructor and students who completed their work on time, the score for a deliverable will be reduced 10% if the deliverable is submitted late and an additional 10% for each 24-hour period that elapses after the due date before the deliverable is submitted. Deliverables submitted more than 4 days after the due date may be awarded a maximum score of 60%.

Course Grade of Incomplete:

Incompletes will not be issued except under very extreme personal conditions. The instructor may assign an Incomplete (I) grade only if at least 75% of the required coursework has been completed at passing quality and holding you to previously established time limits would result in unjust hardship to you. All unfinished work must be completed by the date set by the instructor. Left unchanged, an Incomplete automatically becomes an F after one year.

<http://registrar.iupui.edu/incomp.html>

COURSE DELIVERABLES

- There will be 15 on-line class discussions set up on Canvas for the readings. For some weeks, there will be only one discussion; for other weeks, there will be two discussions. Each student should post at least one significant discussion point – typically 2 to 4 paragraphs or a minimum of 300 words – for each discussion assigned on Canvas. Each discussion point should start with a summary of one or more key points from the lecture/readings, and then continue to note an implication of something you read or heard for design practice and perhaps connecting it to a specific example from your experience. For each discussion point assignment, each student should review the discussion points posted by other students and post a response to one other student that adds to the discussion in a significant way.
- There will be two projects: a Midterm Project that focuses on formative design research methods and a Final Project that focuses on generative design research methods. Each project involves interim deliverables and then a complete project report and project presentation. The project presentation is expected to include a set of slides accompanied by an audio recording. Specific instructions for the projects will be provided. Although students will have opportunities to discuss and review project activities and deliverables with other students, each student is expected to create and submit individual deliverables for the projects.

Scoring of Deliverables

Deliverables	Total Points Possible
Discussion Points (20 points each)	300
Midterm Project	
Interim Deliverables (25 points each)	100
Project Report	200
Project Presentation	50
Final Project	
Interim Deliverables (25 points each)	100
Project Report	200
Project Presentation	50
TOTAL POINTS POSSIBLE:	1000

Course Grading Scale:

Letter Grade	% of Total Points	Description
A +	≥ 98.00%	Outstanding achievement
A	93.00 – 97.99%	Excellent achievement
A -	90.00 – 92.99%	Very good work
B +	87.00 – 89.99%	Good work
B	83.00 – 86.99%	Marginal work
B -	80.00 – 82.99%	Very marginal work
C +	77.00 – 79.99%	Unacceptable work
C	73.00 – 76.99%	Unacceptable work

TENTATIVE WEEKLY SCHEDULE

The official, live schedule for the course will be maintained in Canvas.

Recordings of lectures will be posted to an IUPUI website for the course. A link to the website will be provided in Canvas. Recordings will typically be posted by 6:00pm on Thursday each week.

Week	Dates	Lecture Topics	Student Activities/Deliverables
1	Mon Jan 7 – Wed Jan 16	Course Introduction & Overview Design Process Research Plans	Post to the Student Introductions discussion on Canvas by Jan 14 at 11:59pm Read Chapters 1 & 4 in Observing the User Experience Post Week 1 discussion points on Canvas by Jan 16 at 11:59pm Respond to other student discussion points by Jan 17 at 11:59pm
2	Thu Jan 17 – Wed Jan 23	Introduction to Midterm Project Surveys Interviews	Read Chapters 6 & 12 in Observing the User Experience Post Week 2 discussion points on Canvas by Jan 23 at 11:59pm Respond to other student discussion points by Jan 24 at 11:59pm
3	Thu Jan 24 – Wed Jan 30	Observation Contextual Interviews	Read Chapter 9 in Observing the User Experience Read Chapters 1, 2, and 3 in Contextual Design Second Edition Post Week 3 discussion points on Canvas by Jan 30 at 11:59pm Respond to other student discussion points by Jan 31 at 11:59pm
4	Thu Jan 31 – Wed Feb 6	Qualitative Data Analysis Affinity Diagrams	Read Chapter 15 in Observing the User Experience Read Chapters 5 & 6 in Contextual Design Second Edition Post Week 4 discussion points on Canvas by Feb 6 at 11:59pm Respond to other student discussion points by Feb 7 at 11:59pm Midterm Project-Survey Document and Midterm-Project Interview Document due by Feb 6

5	Thu Feb 7 – Wed Feb 13	Personas Work/Activity Models Journey Maps Requirements	Read Chapter 17 in Observing the User Experience Read Chapters 7 & 8 in Contextual Design Second Edition Post Week 5 discussion point on Canvas by Feb 13 Respond to other student discussion points by Feb 14 Midterm Project-Contextual Interview Document due by Feb 13
6	Thu Feb 14 – Wed Feb 20	**No presentation this week.**	Work on analysis of contextual interview results
7	Thu Feb 21 – Wed Feb 27	Diary Studies Cultural Probes	Read Chapter 10 in Observing the User Experience Read Gaver, Dunne, & Pacenti (1999), Cultural Probes, interactions, Jan-Feb. Post Week 7 discussion points on Canvas by Feb 27 Respond to other student discussion points by Feb 28 Midterm Project-Research Analysis Document due by Feb 20
8-9	Thu Feb 28 – Fri Mar 8	**No presentation this week.**	**Midterm Project Report & Presentation due by Friday, March 8**
10	Mon Mar 11 – Fri Mar 15	*** Spring Break ***	
11	Mon Mar 18 – Wed Mar 27	Introduction to Final Project Brainstorming, Ideation & Visioning	Read Chapters 9 & 11 in Contextual Design Post Week 11 discussion point on Canvas by Mar 27 Respond to other student’s discussion point by Mar 28
12	Thu Mar 28 – Wed Apr 3	Storyboarding Conceptual Design Prototyping	Read Chapters 13 & 14 in Contextual Design Post Week 12 discussion point on Canvas by Apr 3 Respond to other student’s discussion point by April 4 Final Project-Visioning Document due by Apr 3

13	Thu Apr 4 – Wed Apr 10	Prototyping User Testing	Read Chapter 17 in Contextual Design Post Week 13 discussion point on Canvas by Apr 10 Respond to other student’s discussion point by Apr 11 Final Project-Storyboarding and Conceptual Design document due by Apr 10
14	Thu Apr 11 – Wed Apr 17	**No presentation this week.**	Final Project-Prototype Document and Final Project-User Testing document due by Apr 17
15-16	Thu Apr 18 – Wed May 1	**No presentation this week.**	Final Project Report & Final Project Presentation due by May 1

CODE OF CONDUCT

All students should aspire to the highest standards of academic integrity. Using another student’s work on an assignment, cheating on a test, not quoting or citing references correctly, or any other form of dishonesty or plagiarism shall result in a grade of zero on the item and possibly an F in the course. Incidences of academic misconduct shall be referred to the Department Chair and repeated violations shall result in dismissal from the program.

All students are responsible for reading, understanding, and applying the Code of Student Rights, Responsibilities and Conduct and in particular the section on academic misconduct. Refer to The Code > Responsibilities > Academic Misconduct at <http://www.indiana.edu/~code/>. All students must also successfully complete the Indiana University Department of Education “How to Recognize Plagiarism” Tutorial and Test. <https://www.indiana.edu/~istd>. You must document the difference between your writing and that of others. Use quotation marks in addition to a citation, page number, and reference whenever writing someone else’s words (e.g., following the Publication Manual of the American Psychological Association). To detect plagiarism instructors apply a range of methods, including Turnitin.com. <http://www.ulib.iupui.edu/libinfo/turnitin>.

Academic Misconduct:

1. Cheating: Cheating is considered to be an attempt to use or provide unauthorized assistance, materials, information, or study aids in any form and in any academic exercise or environment.
 - a. A student must not use external assistance on any “in-class” or “take-home” examination, unless the instructor specifically has authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, calculators, computers, and wireless communication devices.
 - b. A student must not use another person as a substitute in the taking of an examination or quiz, nor allow other persons to conduct research or to prepare work, without advanced authorization from the instructor to whom the work is being submitted.
 - c. A student must not use materials from a commercial term paper company, files of papers prepared by other persons, or submit documents found on the Internet.
 - d. A student must not collaborate with other persons on a particular project and submit a copy of a written report that is represented explicitly or implicitly as the student’s individual work.

- e. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.
 - f. A student must not steal examinations or other course materials, including but not limited to, physical copies and photographic or electronic images.
 - g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor or program to whom the work is being submitted.
 - h. A student must not, without authorization, alter a grade or score in any way, nor alter answers on a returned exam or assignment for credit.
2. Fabrication: A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citation to the sources of information.
 3. Plagiarism: Plagiarism is defined as presenting someone else's work, including the work of other students, as one's own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered "common knowledge" may differ from course to course.
 - a. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.
 - b. A student must give credit to the originality of others and acknowledge indebtedness whenever:
 1. directly quoting another person's actual words, whether oral or written;
 2. using another person's ideas, opinions, or theories;
 3. paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;
 4. borrowing facts, statistics, or illustrative material; or
 5. offering materials assembled or collected by others in the form of projects or collections without acknowledgment
 4. Interference: A student must not steal, change, destroy, or impede another student's work, nor should the student unjustly attempt, through a bribe, a promise of favors or threats, to affect any student's grade or the evaluation of academic performance. Impeding another student's work includes, but is not limited to, the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.
 5. Violation of Course Rules: A student must not violate course rules established by a department, the course syllabus, verbal or written instructions, or the course materials that are rationally related to the content of the course or to the enhancement of the learning process in the course.
 6. Facilitating Academic Dishonesty: A student must not intentionally or knowingly help or attempt to help another student to commit an act of academic misconduct, nor allow another student to use his or her work or resources to commit an act of misconduct.

OTHER POLICIES

1. Right to revise: The instructor reserves the right to make changes to this syllabus as necessary and, in such an event, will notify students of the changes immediately.
2. IUPUI course policies: A number of campus policies governing IUPUI courses may be found at the following link: http://registrar.iupui.edu/course_policies.html

3. **Online civility:** To maintain an effective and inclusive learning environment, it is important to be an attentive and respectful participant in on-line discussions, group work, and other classroom exercises. IUPUI nurtures and promotes “a campus climate that seeks, values, and cultivates diversity in all of its forms and that provides conditions necessary for all campus community members to feel welcomed, supported, included, and valued” (IUPUI Strategic Initiative 9). IUPUI prohibits “discrimination against anyone for reasons of race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or [veteran] status” (Office of Equal Opportunity). Profanity or derogatory comments about the instructor, fellow students, invited speakers or other classroom visitors, or any members of the campus community shall not be tolerated. A violation of this rule shall result in a warning and, if the offense continues, possible disciplinary action.
5. **Course Evaluation Policy:** Course evaluations provide vital information for improving the quality of courses and programs. Students are required to complete one course and instructor evaluation for each section in which they are enrolled at the School of Informatics and Computing. This requirement has three exceptions: (a) The student has withdrawn from the course; (b) only one student is enrolled in the section (in which case anonymity is impossible); and (c) the section is a laboratory that must be taken with a course having a different section number. Course evaluations are completed at <https://soic.iupui.edu/app/course-eval/>. Course evaluations are open from the eleventh week. Course evaluations are anonymous, which means that no one can view the name of the student completing the evaluation. In addition, no one can view the evaluation itself until after the instructor has submitted the final grades for the course. In small sections, demographic information should be left blank, if it could be used to identify the student. A course evaluation must close before the grade for that course can be released. To ensure students have had ample opportunity to complete the evaluation, an uncompleted course evaluation could delay the release of the grade for up to a week.
6. **Communication:** The instructor should respond to emails within 48 hours, excluding weekends and holidays, and announce periods of extended absence in advance. The instructor should provide weekly office hours or accept appointments for face-to-face, telephone, or teleconferenced meetings.
7. **Email:** Indiana University uses your IU email account as an official means of communication, and students should check it daily for pertinent information. Although you may have your IU email forwarded to an outside email account, please email faculty and staff from your IU email account.

8. **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 accommodations needed for the course. Students requiring accommodations because of a disability must register with Adaptive Educational Services (AES) and complete the appropriate AES-issued before receiving accommodations. The AES office is located at UC 100, Taylor Hall (Email: aes@iupui.edu, Tel. 317 274-3241). Visit <http://aes.iupui.edu> for more information.
9. **Administrative Withdrawal:** A basic requirement of this course is that students participate in all class discussions and conscientiously complete all required course activities and/or assignments. If a student is unable to attend, participate in, or complete an assignment on time, it is the student's responsibility to inform the instructor. If a student misses more than half of the required activities within the first 25% of the course without contacting the instructor, the student may be administratively withdrawn from this course. Administrative withdrawal may have academic, financial, and financial aid implications. Administrative withdrawal will take place after the full refund period, and a student who has been administratively withdrawn from a course is ineligible for a tuition refund. Contact the instructor with questions concerning administrative withdrawal.

MISSION STATEMENT

The Mission of IUPUI is to provide for its constituents excellence in

- Teaching and Learning;
- Research, Scholarship, and Creative Activity; and
- Civic Engagement.

With each of these core activities characterized by

- Collaboration within and across disciplines and with the community;
- A commitment to ensuring diversity; and
- 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.

STATEMENT OF VALUES

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.