

NEWM-N 450

Usability Principles for New Media Interfaces

Department of Human-Centered Computing

Indiana University School of Informatics and Computing - Indianapolis

Spring 2019 / Section 23166/ Credit Hours: 3

Prerequisite: I270 is recommended

Location: Online

Instructor: Matt Hofmann, MS in Educational Technology, Purdue University

Office Hours: By appointment

Email: Canvas email (preferred) or mwhofman@iupui.edu or mhofmann@gmail.com

Course Description

This course focuses on the examination of principles of human-computer interaction (HCI) and user experience modeling. Students will learn about user-centered design, usability, and usability testing in the context of digital media (e.g., web sites, mobile applications). Topics covered in the course include aesthetics, human factors, and cognitive psychology as related to user interfaces, navigation, and interactivity.

Textbook:

Title: Usability for the Web: Designing Web Sites that Work

Authors: Tom Brinck, Darren Gergle, and Scott D. Wood

Publisher: Morgan Kaufmann

ISBN-10: 1558606580 / ISBN-13: 9781558606586

NOTE: This textbook will serve as a general reference for the course, and can be found in the files area as a PDF. Other assigned readings will be made available via Canvas as links or PDF files.

Principles of Undergraduate Learning (PUL):

Learning outcomes are assessed in the following areas:

1. Core communication and quantitative skills
2. Critical thinking
3. Integration and application of knowledge
4. Intellectual depth, breadth, and adaptiveness
5. Understanding society and culture
6. Values and ethics

This course will emphasize PUL 1, 2, 3, and 5.

Course Learning Outcomes:

EXPECTATIONS, GUIDELINES, AND POLICIES

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

Each student is responsible for completing each deliverable (e.g., assignment, quiz) 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. Should you miss a class, you are still responsible for completing the deliverable and for finding out what was covered in class, including any new or modified deliverable. 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.

- Scores for deliverables submitted after the due date will be reduced as described above unless an explanation for non-participation is accepted by the instructor.

Course Grade of Incomplete:

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 ASSESSMENTS

- There will be a quiz each week that covers the assigned readings. Each quiz will be presented via Canvas and is due by midnight on the date stated in the course schedule.

- There will be 3 smaller assignments. Each assignment must be submitted to Canvas by midnight on the due date stated in the course schedule.
- There will be 1 large project that involves usability and user experience processes and principles to design and evaluate an interactive web site or application.

Grading Scale:

A+	100%	Professional level work, showing highest level of achievement
A	93–99%	Extraordinarily high achievement, quality of work; shows command of the subject matter
A–	90–92%	Excellent and thorough knowledge of the subject matter
B+	87–89%	Above average understanding of material and quality of work
B	83–86%	Mastery and fulfillment of all course requirements; good, acceptable work
B–	80–82%	Satisfactory quality of work
C+	77–79%	Minimally acceptable performance and quality of work
C	73–76%	Unacceptable work, does not demonstrate mastery
C–	70–72%	Unacceptable work
D+	67–69%	Unacceptable work
D	63–66%	Unacceptable work
D–	60–62%	Unacceptable work
F	Below 60	Failure

TENTATIVE WEEKLY SCHEDULE

Week	Dates	Topics	Readings Due	Assignment Due
1	1/9	Course introduction		

2	1/16	Usability and UX Design	<p>"Usability for the Web" - pages 1-18</p> <p>Garrett-The Elements of User Experience-Chapter 1.pdf</p>	Discussion post, Quiz
3	1/23	User Analysis	<p>In "Usability for the Web":</p> <ul style="list-style-type: none"> the first 4 sections of Chapter 2 (pp. 38-49, Understanding your audience, Scenarios, Design for diversity, and Individual differences) all of Chapter 3 <p>"How to Conduct User Interviews" on the Interaction Design Foundation web site.</p> <p>"Personas" on the usability.gov web site.</p>	Discussion post, Quiz
4	1/30	Task Analysis	<p>All of Chapter 4 in "Usability for the Web"</p> <p>"Hierarchical Task Analysis" on the UXmatters web site.</p>	Discussion post, Quiz
5	2/6	Information Architecture	<p>All of Chapter 5 in "Usability for the Web".</p> <p>"The Difference Between Information Architecture and Navigation" on the Nielsen-Norman Group web site.</p> <p>"Basic Patterns for Mobile Navigation" on the Nielsen-Norman Group web site.</p>	Discussion post, Quiz
6	2/13	Page Layout	<p>All of Chapters 6 & 7 in "Usability for the Web".</p> <p>"Principles of Effective Web Design" on the Smashing Magazine site.</p> <p>Optional: The article at this link describes "4 Essential Layout Trends for 2015" from Web Designer Depot, if you are interested in recent layout trends.</p>	Discussion post, Quiz

7	2/20	Visual Design	<p>"Usability for the Web" Chapter 8</p> <p>This short article from the Nielsen Norman Group discusses topics relevant to presentation of text: "Legibility, Readability, and Comprehension: Making Users Read Your Words."</p> <p>"Usability for the Web" Chapter 9</p> <p>This short article from the Nielsen Norman Group discusses use of icons and contrasting colors: "Visual Indicators to Differentiate Items in a List."</p>	Discussion post, Quiz
8	2/27	Usability Evaluation	<p>"Usability for the Web" Chapter 12</p> <p>This short article from the Nielsen Norman Group discusses development of task scenarios for user testing: "Turn User Goals Into Task Scenarios for Usability Testing."</p>	Discussion post, Quiz
9	3/6		Project introduction	
10	3/13		Spring Break	
11	3/20		Project Deliverable	
12	3/27		Project Deliverable	
13	4/3		Project Deliverable	
14	4/10		Project Deliverable	
15	4/17		Project Deliverable	
16	4/24		Project Deliverable	

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.

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/turnitinhttp://www.ulib.iupui.edu/libinfo/turnitin>

Academic Misconduct:

1. **Cheating:** ^{[[SEP]]}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.
 1. 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.
 2. 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.
 3. 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.
 4. 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.
 5. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.
 6. A student must not steal examinations or other course materials, including but not limited to, physical copies and photographic or electronic images.
 7. 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.
 8. 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.
 9. **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.
 10. **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.
 1. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.
 2. A student must give credit to the originality of others and acknowledge indebtedness whenever: ^{[[SEP]]}
 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

6. **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.
7. **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.
8. **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.
9. **IUPUI course policies:** A number of campus policies governing IUPUI courses may be found at the following link: http://registrar.iupui.edu/course_policies.htmlhttp://registrar.iupui.edu/course_policies.html
10. **Classroom civility:** To maintain an effective and inclusive learning environment, it is important to be an attentive and respectful participant in lectures, discussions, group work, and other classroom exercises. Thus, unnecessary disruptions should be avoided, such as ringing cell phones engagement in private conversations and other unrelated activities. Texting, surfing the Internet, and posting to Facebook or Twitter during class are generally not permitted. 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.
11. **Bringing children to class:** To ensure an effective learning environment, children are not permitted to attend class with their parents, guardians, or childcare providers.
12. **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.

13. **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.

OTHER POLICIES

1. **IUPUI course policies:** A number of campus policies governing IUPUI courses may be found at the following link: http://registrar.iupui.edu/course_policies.htmlhttp://registrar.iupui.edu/course_policies.html
2. **Classroom civility:** To maintain an effective and inclusive learning environment, it is important to be an attentive and respectful participant in lectures, discussions, group work, and other classroom exercises. Thus, unnecessary disruptions should be avoided, such as ringing cell phones engagement in private conversations and other unrelated activities. Texting, surfing the Internet, and posting to Facebook or Twitter during class are generally not permitted. 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.
3. **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.

4. **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

Important Supplement for IUPUI Syllabi

IUPUI Policy on Disability Accommodations

Students needing accommodations because of disability will need to register with Adaptive Educational Services and complete the appropriate forms issued by AES before accommodations will be given. The AES office is located in Taylor Hall, UC 100. You can also reach the office by calling 274-3241.

IUPUI Policy on Religious Holidays

IUPUI respects the right of all students to observe their religious holidays and will make reasonable accommodation, upon request, for such observances. Students seeking accommodation for religious observances must submit a request in writing to the course instructor by the end of the second week of the semester and should use the Request for Course Accommodation Due to Religious Observance Form. More information on the IUPUI Policy on Religious Holidays is available here: <http://registrar.iupui.edu/religious.html>.

IUPUI Policy on Academic Integrity:

The IU Code of Student Rights, Responsibilities, and Conduct states that students must uphold and maintain academic and professional honesty and integrity; the code defines academic misconduct as any activity that tends to undermine the academic integrity of the institution. Students engaging in academic misconduct may therefore receive penalties from their course instructor and disciplinary action from the university. Policies against academic misconduct apply to all course-, department-, school-, and university-related activities. Academic misconduct may involve human, hard-copy, or electronic resources and includes but is not limited to the following: cheating, fabrication, plagiarism, interference, violation of course rules, and facilitating academic dishonesty. For definitions of these activities, visit <http://studentcode.iu.edu/responsibilities/academicmisconduct.html>. For information on how faculty and students are expected to handle cases involving academic misconduct,

visit <http://registrar.iupui.edu/misconduct.html>. Additional information about the rights and responsibilities of IU students is available at <http://studentcode.iu.edu/>.

IUPUI Policy on Sexual Misconduct

As your instructor, one of my responsibilities is to help create a safe learning environment on our campus. Title IX and our own Sexual Misconduct policy prohibit sexual misconduct. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to speak to someone confidentially, please visit <http://stopsexualviolence.iu.edu/help/index.html> (Links to an external site.) for contact information.

It is also important that you know that federal regulations and University policy require me to promptly convey any information about potential sexual misconduct known to me to our campus' Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, they will work with a small number of others on campus to ensure that appropriate measures are taken and resources are made available to the student who may have been harmed.

Protecting a student's privacy is of utmost concern, and all involved will only share information with those that need to know to ensure the University can respond and assist. I encourage you to visit stopsexualviolence.iu.edu (Links to an external site.) to learn more about available resources on campus and in the community.

Education and Title VI

Title VI of the Civil Rights Act of 1964 protects people from discrimination based on race, color or national origin in programs or activities that receive Federal financial assistance.

Programs and activities that receive ED funds must operate in a non-discriminatory manner. These may include, but are not limited to: admissions, recruitment, financial aid, academic programs, student treatment and services, counseling and guidance, discipline, classroom assignment, grading, vocational education, recreation, physical education, athletics, housing and employment, if it affects those who are intended to benefit from the Federal funds.

<http://www2.ed.gov/about/offices/list/ocr/docs/hq43e4.html>

In case you miss a class, the recordings from class are posted at: http://disted.informatics.iupui.edu/4175_INFO/N450/ (Note: Not all class sessions will be recorded - especially after the class projects start.)

A pdf of the course syllabus is available here: [N450-I400-Classroom-Syllabus-Spring 2017.pdf](#)

Please also review this document for information about IUPUI policies: [Important Supplement For IUPUI Syllabi.pdf](#)