INFO-H 680
HUMAN-COMPUTER INTERACTION PROFESSIONAL PRACTICE 1
Department of Human-Centered Computing
Indiana University School of Informatics and Computing - Indianapolis
Fall 2016

Section No.: 23717 – 3 credit hours
Time: Thursdays 6:00 – 8:40 pm
Location: IT 077, Informatics & Communications Technology Complex
535 West Michigan Street, Indianapolis, IN 46202
First Class: August 25, 2016
Website: https://iu.instructure.com/courses/1576901

Instructor: Mark Larew, PhD, Visiting Lecturer
Office: WK 116, Walker Plaza, 719 Indiana Avenue, Indianapolis, IN 46202
Office Phone: (317) 278-4141
Office Hours: By appointment (Options: Mon 1:00 – 2:30 pm, Thu 4:00 – 5:30 pm)
Email: Canvas mail or mlarew@iupui.edu

Prerequisites: Advanced graduate standing or consent of instructor.

RECOMMENDED TEXT BOOK
Title: Designing for the Digital Age: How to Create Human-Centered Products and Services
Author: Kim Goodwin
Copyright: 2009
Publisher: Wiley
ISBN-10: 0470229101

** This book is available online for FREE to IUPUI students using Books24x7 **

Students are not required to read this book, but it is recommended as a resource for information that may be helpful for completing the Final Project.

COURSE DESCRIPTION
H680 is Part 1 of a 2-semester course sequence that supports student completion of the Capstone Project (also called the Final Project) option for the M.S. in Human-Computer Interaction (http://soic.iupui.edu/hcc/graduate/hci-masters/). H681 – offered in the 2nd semester – is Part 2 of this sequence.

The Capstone Project is expected to showcase the accumulated knowledge and skills of the student in the areas of HCI design and development. This will be accomplished by selecting a project topic within a problem space that allows application in a significant way of HCI design and development knowledge and skills. The project topic may be provided by a business or organization – or students may select a topic of interest, subject to approval of the course instructor. The project topic needs to support all of the activities listed for H680 and H681 within this 2-semester course sequence.
H680 involves:

- identifying the project topic and stakeholders
- planning the project and managing the project to meet stakeholders needs
- conducting research to identify user and business needs and requirements
- identifying relevant published research and information relevant to the topic
- generating multiple design concepts to address the identified user and business needs and requirements
- generating one or more low-fidelity prototypes to evaluate design concepts
- creating a poster to summarize the project (to be presented to a local professional organization)
- creating a report to describe activities completed in H680
- delivering a presentation to summarize activities completed in H680

**Successful completion of H680 is required for a student to proceed to H681.**

H681 involves:

- creating a high-fidelity prototype
- evaluation of the prototype by stakeholders
- user testing of the prototype
- completion of a final project report
- delivering a presentation to summarize activities in H681
- creating/updating a poster to summarize the completed project (to be presented at a Capstone Project event at the end of the 2nd semester)

**All Final Project deliverables need to be complete by the end of the 2nd semester. Incompletes are not permitted for H681.**

**PROJECT TOPICS**

The Human-Centered Computing department encourages students to work on projects proposed by a business or organization – outside of or within IUPUI. Working with a business or organization could have several positive outcomes beyond the Final Project, including:

- experience with working with a business or organization on a team project
- a business/organization project to add to your portfolio
- a potential reference or letter of recommendation that you can use when applying for jobs
- a potential internship or full-time position with the business/organization

The course instructor will arrange for interested businesses and organizations to propose projects for H680/H681 students, but availability of enough business/organization proposals for all students cannot be guaranteed.

Working on a project proposed by a business or organization is not required. Instead, students may propose a project topic for review by the course instructor. The project deliverables are expected to be the same as outlined above. In addition, the project will need to arrange for at least one expert relevant to the topic to provide periodic (e.g., monthly) reviews and input to the project.
In all cases, the project topic needs to have a scope that can reasonably support the activities required for H680/H681 and that can realistically be completed by the conclusion of H681.

For projects proposed by a business or organization, small teams of 3-4 students will be assigned to the project. Students will be asked to provide information in a survey posted on Canvas that will help the instructor form teams that have the experience and skills needed to support a Final Project. Teams will be able to view presentations of the projects proposed by businesses and organizations and indicate a preference for a topic, but the instructor will determine the assignments of teams to projects.

For projects proposed by students, a small team (2-3 students) or, in some cases, an individual, will be assigned to the project. Determination of the number of students to work on the project will be part of the instructor review of the student project proposal.

**LEARNING OUTCOMES**

Upon successful completion of this course, students will have the ability to:

*Project Management / Oversight*

1. Demonstrate general skills related to project management, interpersonal communication, leadership, and organizational best practices associated with the totality of the Final Project.
2. Demonstrate the ability to work independently, creatively, meet deadlines, and operate interdependently with teammates from within the class or from within or outside of campus.
3. Participate individually and or as a responsible member of a team in project design and regular project review meetings.
4. Function effectively with a team (if applicable) to accomplish a common goal.

*HCI Knowledge and Methods*

5. Demonstrate a mastery of the theories and best practices of the field of human-computer interaction design; including both theoretical knowledge and the application of human-centered methods.
6. Evaluate product design ideas for a suitable project.
7. Demonstrate the ability to apply problem-solving processes, technologies and systems, and innovative thinking to create solutions.
8. Apply both qualitative and quantitative analysis to human-centered design decision-making.
9. Develop useful and effective performance and test methods for the project.
10. Analyze a problem, and identify and define the human and system requirements appropriate to its solution.
11. Design, implement, and evaluate a computer-based system, process, component, or program to meet desired user/customer and business needs.
12. Demonstrate critical thinking by integrating relevant HCI models, theories, research and practices into the Final Project.
13. Demonstrate information technology fluency.
Communication

14. Demonstrate effective oral communication.
15. Demonstrate an ability to write and produce a professional report that communicates with clarity the totality of the project.
16. Analyze critically and speak publicly about each product stage and all related issues and outcomes of the project.
17. Demonstrate presentation skills in presenting a project in a formal setting with the goal of achieving critical feedback from the instructor, fellow-classmates, and possibly outside partners from industry.

TENTATIVE WEEKLY SCHEDULE

The official, live schedule for the course will be updated in Canvas as needed.

The schedule presented below provides a general outline for class activities and due dates for project deliverables. The dates for project activities and deliverables are subject to modification based on a specific project plan. The deliverables listed in the schedule are to be submitted to the instructor – via Canvas when feasible. A team may have other deliverables or different dates based on arrangements made with a business/organization. The team must use the project updates in classroom sessions to keep the instructor informed of any deviations from the schedule for project deliverables.

Students are expected to attend all classroom sessions listed below. Representatives from a business/organization or other stakeholders can attend project meetings during class time as needed (this needs to be arranged with the business/organization). If project meetings with a business/organization are scheduled off-site (e.g., at the business/organization’s office), these meetings should be scheduled on a day/time other than the class time.

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Class Activities &amp; Project Deliverables Due</th>
</tr>
</thead>
</table>
| 1    | Thu Aug 25  | **Complete student survey on Canvas prior to class.**  
**Classroom Session 1:** Course overview; review potential Final Project topics; student introductions; initial project team assignments |
| 2    | Thu Sept 1  | **Classroom Session 2:** Project proposals from businesses and organizations; assignment of teams to projects; initial meeting of project teams with business/organization representatives to develop initial high level project plan.  
**Note 1:** Any students working on a student project proposal must submit the proposal to the instructor by the end of class on Sept 1.  
**Note 2:** Any students/teams not assigned to a project proposed by a business or organization will meet with the instructor during the classroom session on Sept 1 to discuss project options. |
| 3    | Thu Sept 8  | **Classroom Session 3:** Initial check-in for all students; break into teams; all teams meet with the instructor to provide a brief project update  
**Project Focus:** Develop Project Plan |
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Classroom Session</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Thu Sept 15</td>
<td>Classroom Session 4</td>
<td>Initial check-in for all students; break into teams; all teams meet with the instructor to provide a brief project update. <strong>Project Focus</strong>: Project plan, Background research – literature search. <strong>Project Deliverables</strong>: Project Plan.</td>
</tr>
<tr>
<td>5</td>
<td>Thu Sept 22</td>
<td>Classroom Session 5</td>
<td>Break into teams; all teams meet with instructor to provide a brief project update. <strong>Project Focus</strong>: Observations to understand user and business needs. <strong>Project Deliverables</strong>: None.</td>
</tr>
<tr>
<td>6</td>
<td>Thu Sept 29</td>
<td>Classroom Session 6</td>
<td>Break into teams; all teams meet with instructor to provide a brief project update. <strong>Project Focus</strong>: Compilation and organization of background research and user/business needs and requirements to identify problem space. <strong>Project Deliverables</strong>: None. <em>Instructor provides September status report to businesses/organizations.</em></td>
</tr>
<tr>
<td>7</td>
<td>Thu Oct 6</td>
<td>Classroom Session 7</td>
<td>Break into teams; all teams meet with instructor to provide a brief project update. <strong>Project Focus</strong>: Complete definition of problem space. <strong>Project Deliverables</strong>: Definition of problem space.</td>
</tr>
<tr>
<td>8</td>
<td>Thu Oct 13</td>
<td>Classroom Session 8</td>
<td>Break into teams; all teams meet with instructor to provide a brief project update. <strong>Project Focus</strong>: Ideation and conceptual design. <strong>Project Deliverables</strong>: None.</td>
</tr>
<tr>
<td>9</td>
<td>Thu Oct 20</td>
<td>Classroom Session 9</td>
<td>Break into teams; all teams meet with instructor to provide a brief project update. <strong>Project Focus</strong>: Ideation and conceptual design. <strong>Project Deliverables</strong>: None.</td>
</tr>
<tr>
<td>10</td>
<td>Thu Oct 27</td>
<td>Classroom Session 10</td>
<td>Break into teams; all teams meet with instructor to provide a brief project update. <strong>Project Focus</strong>: Ideation and conceptual design – review with stakeholders. <strong>Project Deliverables</strong>: Documentation of a minimum of 3 conceptual design options. <em>Instructor provides October status report to businesses/organizations.</em></td>
</tr>
<tr>
<td>11</td>
<td>Thu Nov 3</td>
<td>Classroom Session 11</td>
<td>Break into teams; all teams meet with instructor to provide a brief project update. <strong>Project Focus</strong>: Poster, low-fidelity prototyping. <strong>Project Deliverables</strong>: Poster summarizing problem space and conceptual design options.</td>
</tr>
<tr>
<td>12</td>
<td>Thu Nov 10</td>
<td>Indiana UXPA World Usability Day Event (9:00am – 4:00pm, location TBD) – opportunity for teams to present poster with overview of project. <em><strong>No classroom session: Teams meet on their own as needed.</strong></em></td>
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| 13 Thu Nov 17 | **Classroom Session 12:** Break into teams; all teams meet with instructor to provide a brief project update  
**Project Focus:** Low-fidelity prototyping  
**Project Deliverables:** None |
| 14 Thu Nov 24 | ***Thanksgiving Break – no class*** |
| 15 Thu Dec 1 | **Classroom Session 13:** Break into teams; all teams meet with instructor to provide a brief project update  
**Project Focus:** Review of low-fidelity prototype with stakeholders, create H680 report and presentation  
**Project Deliverables:** Low-fidelity prototype  
*Instructor provides November status report to businesses/organizations* |
| 16 Thu Dec 8 | **Classroom Session 14:** Student Project Presentations for H680  
**Project Deliverables:** H680 Report and H680 presentation |

**Project Team Weekly Status Updates**

1. Each week, students will provide a status report of the progress on their project to the instructor.
2. Students will develop a status report format to document progress.
3. Each member of a project team must be prepared to contribute to the status report or answer questions.
4. For teams working with a company/organization, the team must designate one member as the project manager – who will be responsible for providing status reports to the company/organization, based on arrangements made with the team’s primary contact for the company/organization. In some cases, this may be a weekly report. In other cases, the contact may want updates only bi-weekly or monthly. The format used for status reports for the instructor may be used – or the contact may request a different format.

**COURSE EXPECTATIONS, GUIDELINES, AND POLICIES**

**Attendance Policy**

1. Attendance is mandatory.
2. All attendance and assignment deadline/due-date policies are in place to protect student educational rights, maintain grading equity, and promote individual and team morale.
3. Attendance will be taken in every class session.
4. Students are allowed a maximum of two absences from classroom sessions. Missing class does NOT excuse a student from weekly project participation. On the third absence, a student’s final grade for the semester will be reduced by 10%. On the fourth absence, an additional 10% will be subtracted from the final grade, and so on.
5. If a student uses up their two absences, then has a serious event (forcing them to miss class), they will still receive a 10% reduction in their grade. For this reason, it is strongly recommended that students do not miss any classes, unless for unusually serious and documented reasons.
DUE DATES FOR PROJECT DELIVERABLES

1. **Late Deliverables:** All project deliverables required to be submitted to the instructor for the course have due dates, which will be documented in the project plan. The score for a deliverable that is submitted within 24 hours after the due date will be reduced by 10% of the maximum score. The score will be reduced by an additional 10% of the maximum score for every additional 24 hours after the due date.

2. **Company/Organization Project Due Dates:** Teams that have developed a project timeline in coordination with a company/organization need to abide by all pre-agreed upon due dates for deliverables to the company/organization. Teams working with a company/organization should be highly sensitive to the fact that their respective company/organization is investing considerable time/effort/$$$ in supporting your work on their project. As such, students need to be fully invested in fulfilling their obligations to the company/organization. The instructor will collect periodic feedback from the company/organization to determine if the team is meeting commitments in the project plan.

3. **Communication:** For teams working with a company/organization, the student assigned to be project manager for the team is responsible for communication with the company/organization regarding progress against the project plan and any issues with meeting due dates for deliverables to the company/organization. The other team members are, in turn, responsible for cooperating with the project manager and communicating any project issues in a timely manner. The project manager may identify a project management software tool (e.g., Basecamp) to use on the project – or the company/organization may have a tool that they prefer to use.
COURSE GRADE

The components of the H680 course grade are outlined below. Details of the project deliverables, report, presentation and poster will be provided in separate documentation. For teams working with a company/organization, feedback from the company/organization will be used by the instructor as a factor in the scores.

<table>
<thead>
<tr>
<th>Course Components and Project Deliverables</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project status updates and communication</td>
<td>100</td>
</tr>
<tr>
<td>Project Plan Deliverable</td>
<td>100</td>
</tr>
<tr>
<td>Definition of Problem Space Deliverable</td>
<td>200</td>
</tr>
<tr>
<td>Documentation of 3 Conceptual Design Options Deliverable</td>
<td>200</td>
</tr>
<tr>
<td>Low-Fidelity Prototype Deliverable</td>
<td>200</td>
</tr>
<tr>
<td>H680 Project Report</td>
<td>100</td>
</tr>
<tr>
<td>H680 Project Presentation</td>
<td>50</td>
</tr>
<tr>
<td>H680 Project Poster</td>
<td>50</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,000</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>% of Max Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>97.0 – 100.00</td>
<td>Outstanding achievement, given at the instructor’s discretion</td>
</tr>
<tr>
<td>A</td>
<td>93.0 – 96.99</td>
<td>Excellent achievement</td>
</tr>
<tr>
<td>A−</td>
<td>90.0 – 92.99</td>
<td>Very good work</td>
</tr>
<tr>
<td>B+</td>
<td>87.0 – 89.99</td>
<td>Good work</td>
</tr>
<tr>
<td>B</td>
<td>83.0 – 86.99</td>
<td>Marginal work</td>
</tr>
<tr>
<td>B−</td>
<td>80.0 – 82.99</td>
<td>Very marginal work</td>
</tr>
<tr>
<td>C+</td>
<td>77.0 – 79.99</td>
<td>Unacceptable work (Elective or core course must be repeated)</td>
</tr>
<tr>
<td>C</td>
<td>73.0 – 76.99</td>
<td>Unacceptable work (Elective or core course must be repeated)</td>
</tr>
<tr>
<td>C−</td>
<td>70.0 – 72.99</td>
<td>Unacceptable work (Elective or core course must be repeated)</td>
</tr>
<tr>
<td>D+</td>
<td>67.0 – 69.99</td>
<td>Unacceptable work (Elective or core course must be repeated)</td>
</tr>
<tr>
<td>D</td>
<td>63.0 – 66.99</td>
<td>Unacceptable work (Elective or core course must be repeated)</td>
</tr>
<tr>
<td>D−</td>
<td>60.0 – 62.99</td>
<td>Unacceptable work (Elective or core course must be repeated)</td>
</tr>
<tr>
<td>F</td>
<td>Below 60.00</td>
<td>Unacceptable work (Elective or core course must be repeated)</td>
</tr>
</tbody>
</table>
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 student must not:
   a. 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. 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. Use materials from a commercial term paper company, files of papers prepared by other persons, or submit documents found on the Internet.
   d. 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. Use any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.
   f. Steal examinations or other course materials, including but not limited to, physical copies and photographic or electronic images.
   g. 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. Without authorization, alter a grade or score in any way, nor alter answers on a returned exam or assignment for credit.

2. Plagiarism—Plagiarism is defined as presenting someone else’s work, including the work of other students, as one’s own:
   a. 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.
b. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.
c. 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.

3. **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.

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. **Facilitating Academic Dishonesty:** Any student who intentionally or knowingly helps (or attempts to helping) another student to commit an act of academic misconduct (as outlined in this syllabus) or who allows another student to use his or her work or resources to commit an act of misconduct will face immediate academic discipline.

6. **Violation of Course Rules/Policies/Instructions:** Student are strongly encouraged to adhere to all course rules, policies, and instructions as outlined in the course syllabus, verbal/written instructions, or the course materials that are rationally related to the content of the course or to the enhancement of the learning process.

**Classroom Civility**

1. 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.

2. The School of Informatics and Computing holds that 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, either face-to-face or electronically. Texting, surfing the Internet, and posting to Facebook, Twitter, or other social media during class are generally not permitted.

3. Students are strongly encouraged to switch their cell phones to vibrate during class time. If students receive what they believe to be an urgent call, they may quietly leave the classroom to address the matter.

4. Concluding Statement: 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).

Other Related 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.html

2. Bringing children to class: To ensure an effective learning environment, children are not permitted to attend class with their parents, guardians, or childcare providers according to IUPUI policy.

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 (aes@iupui.edu, 317-274-3241). Visit http://aes.iupui.edu for more information.

MISSION STATEMENT & STATEMENT OF VALUES
1. 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:
   a. Collaboration within and across disciplines and with the community;
   b. A commitment to ensuring diversity; and
   c. Pursuit of best practices.

2. 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.

3. 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.

4. IUPUI recognizes students as partners in learning.

5. IUPUI values the opportunities afforded by its location in Indiana’s capital city and is committed to serving the needs of its community.

6. 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.

7. 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.

8. IUPUI is committed to the personal and professional development of its students, faculty, and staff and to continuous improvement of its programs and services.