Course Objectives: This course will delve into the human psychological side of human-computer interaction. Although the focus will be on cognitive psychology, students will learn concepts from human factors, perception, memory, decision making, and social psychology, and each topic will be discussed in the context of HCI. The goal is to provide HCI students with a broad background in the psychological principles that influence how humans interact with devices ranging from cell phones to virtual reality.

Course Webpage: https://bb.its.iastate.edu

Course meeting time and place:
- Tuesdays and Thursdays from 9:30 AM to 10:45 AM in Howe 1324

Required Readings:
  
  Link to publisher’s website:
  http://www.pearsonhighered.com/educator/academic/product/0,3110,0131837362,00.html

  Link to Amazon website:
  http://www.amazon.com/Introduction-Human-Factors-Engineering-2nd/dp/0131837362/ref=sr_1_1?ie=UTF8&s=books&qid=1263151886&sr=8-1

- Additional chapters and articles posted on the course website, marked “required.”

Optional Readings:
- Additional chapters and articles posted on the course website, marked “optional.”

Course Structure: This course will feature on-campus students Tuesdays and Thursdays from 9:30 AM to 10:45 AM and off-campus students who may participate live (see technology info below) or watch videos of classes on their own. Because of this mix, almost all deadlines occur on Monday to give students the weekend to work and catch up.

Your primary responsibilities include:
- Posting weekly reactions to readings (see “Reading reaction instructions” handout for details)
- Performing weekly activities and discussing them in class or posting a summary and reaction to the weekly activity.
- Completing a semester-long research project (see below, and “Research project” handout)
- Completing a final exam (a take-home exam, distributed on the last day of class)

There is one major research project in the course, which will span the semester. The project will be completed in a small group with other students. The goal of this project is for you to become an expert in an area of cognitive psychology that relates substantially to human-computer interaction. The project will involve choosing an HCI topic that involves some aspect of cognitive psychology, identifying existing psychology research in the area, and communicating your findings through an in-class presentation or a written paper. More details can be found on the research project instructions handout.

Weekly structure:

**Monday night (by midnight Central Time)**
- Post reactions (on Blackboard) to one or more weekly readings.
- Off-campus students write an activity post (on Blackboard) about the previous week’s activity (on-campus students will have already participated in the in-class activity discussion and therefore do not need to post online about the activity).
- Complete any other assignments related to your research projects.

**Tuesday and Thursday class:**
- Lecture and discussion of the readings
- Small-group activity, and informal presentations and discussions of the activity (in-class students only; off-campus students will complete the activity independently and post their reactions to the activity on Blackboard).

**Grading:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in course activities (in-class discussion)</td>
<td>20%</td>
</tr>
<tr>
<td>Reaction posts to weekly readings</td>
<td>20%</td>
</tr>
<tr>
<td>Research project</td>
<td>35%</td>
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<tr>
<td>Final exam: take-home exam, distributed on the last day of class</td>
<td>25%</td>
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<tr>
<td>(due on Wednesday of final exam week)</td>
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</table>

**Late assignment policies:**
- Late reading reaction posts will receive zero credit. There are 13 opportunities to post reading reactions, and you only need to complete 10 of those. In other words, you can skip up to 3 reading reaction posts with no penalty, but the remaining 10 must be completed on time.
- Late activity posts will receive half credit if they are completed within one week of the due date. Activity posts more than one week late will receive zero credit.
- Late final exams will be docked 5% for each day late.
- Late penalties for components of the research project depend on the specific assignment. Late research papers (for off-campus students who choose the paper option) will be docked 5% for each day late.
Letter grade assignment based on point totals:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
<th>Percentage</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>93%-100%</td>
<td>A</td>
<td>73%-76.99%</td>
<td>C</td>
</tr>
<tr>
<td>90%-92.99%</td>
<td>A-</td>
<td>70%-72.99%</td>
<td>C-</td>
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<tr>
<td>87%-89.99%</td>
<td>B+</td>
<td>67%-69.99%</td>
<td>D+</td>
</tr>
<tr>
<td>83%-86.99%</td>
<td>B</td>
<td>63%-66.99%</td>
<td>D</td>
</tr>
<tr>
<td>80%-82.99%</td>
<td>B-</td>
<td>50%-62.99%</td>
<td>D-</td>
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<tr>
<td>77%-79.99%</td>
<td>C+</td>
<td>0%-49.99%</td>
<td>F</td>
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</table>

Technology in this Course
- Blackboard (https://bb.its.iastate.edu/)
- Live video during class and recorded video posted after class are available through Blackboard (use the “Class Meetings” link).
- On-campus students should consider bringing a laptop to class, as it will often be useful during small-group activities.

Communication: During office hours, students can contact the professor or TA in person, over the phone, or through video conferencing. Responses to e-mails should arrive within 24 hours, although weekend responses could take longer.

Academic dishonesty: The class will follow Iowa State University’s policy on academic dishonesty. Anyone suspected of academic dishonesty will receive a zero on the assignment/exam and will be reported to the Dean of Students Office. http://www.dso.iastate.edu/ja/academic/misconduct.html

Disability accommodation: Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact Dr. Kelly to set up a meeting within the first two weeks of the semester or as soon as you become aware of your need. Before meeting with Dr. Kelly, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-7220 or email disabilityresources@iastate.edu. Retroactive requests for accommodations will not be honored.

Dead week: This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the Faculty Handbook http://www.provost.iastate.edu/resources/faculty-handbook.

Harassment and discrimination: Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon race, ethnicity, sex (including sexual assault), pregnancy, color, religion, national origin, physical or mental disability, age, marital status, sexual orientation, gender identity, genetic information, or status as a U.S. veteran. Any student who has concerns about such behavior should contact his/her instructor, Student Assistance at 515-294-1020 or email dso-sas@iastate.edu, or the Office of Equal Opportunity and Compliance at 515-294-7612.
**Religious accommodation:** If an academic or work requirement conflicts with your religious practices and/or observances, you may request reasonable accommodations. Your request must be in writing, and your instructor or supervisor will review the request. You or your instructor may also seek assistance from the Dean of Students Office or the Office of Equal Opportunity and Compliance.

**Schedule of Topics and Assignments:** All information and timelines listed below are tentative, and will undergo slight changes. Major changes will be announced in class, but you should get in the habit of checking the upcoming schedule every week.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment (due Monday nights)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>WEEK 1</strong></td>
<td></td>
</tr>
<tr>
<td>8/26</td>
<td>Introduction</td>
<td>Get online</td>
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<tr>
<td>8/28</td>
<td>Online shopping activity (#1)</td>
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<tr>
<td></td>
<td><strong>WEEK 2</strong></td>
<td></td>
</tr>
<tr>
<td>9/2</td>
<td>Research methods</td>
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<tr>
<td>9/4</td>
<td>Experimental design activity (#2)</td>
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<tr>
<td></td>
<td><strong>WEEK 3</strong></td>
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<tr>
<td>9/9</td>
<td>Visual perception</td>
<td>Research project partners</td>
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<tr>
<td>9/11</td>
<td>Visual perception in virtual environments</td>
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<tr>
<td></td>
<td><strong>WEEK 4</strong></td>
<td></td>
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<tr>
<td>9/16</td>
<td>Visual guidance of movement</td>
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<tr>
<td>9/18</td>
<td>Moving through virtual environments</td>
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<tr>
<td></td>
<td><strong>WEEK 5</strong></td>
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<tr>
<td>9/23</td>
<td>Psychology of design</td>
<td>Research topic proposals ($\times 2$ or $\times 3$, depending on group size)</td>
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<tr>
<td>9/25</td>
<td>Discussion of research project topics</td>
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<td><strong>WEEK 6</strong></td>
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<tr>
<td>9/30</td>
<td>Bad design activity (#3)</td>
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<tr>
<td>10/2</td>
<td>Attention</td>
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<td></td>
<td><strong>WEEK 7</strong></td>
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<tr>
<td>10/7</td>
<td>Attention</td>
<td>Research article citations ($\times 2$ or $\times 3$, depending on group size)</td>
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<td>10/9</td>
<td>Visual search activity (#4)</td>
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<td><strong>WEEK 8</strong></td>
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<tr>
<td>10/14</td>
<td>Memory</td>
<td>Research article 1 summary</td>
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<td>10/16</td>
<td>Prospective memory activity (#5)</td>
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<td><strong>WEEK 9</strong></td>
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<tr>
<td>10/21</td>
<td>Displays</td>
<td>Research article 2 summary</td>
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<tr>
<td>10/23</td>
<td>Information visualization activity (#6)</td>
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<td></td>
<td><strong>WEEK 10</strong></td>
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<tr>
<td>10/28</td>
<td>Control</td>
<td>Research article 3 summary</td>
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<td>10/30</td>
<td>Fitts’ law activity (#7)</td>
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<td><strong>WEEK 11</strong></td>
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<td>11/4</td>
<td>Individual differences &amp; universal design</td>
<td>Research article 4 summary</td>
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<tr>
<td>11/6</td>
<td>Connecting research and design activity (#8)</td>
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<tr>
<td>WEEK 12</td>
<td>Week 12 Events</td>
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<tr>
<td>11/11</td>
<td>Decision making</td>
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<tr>
<td>11/13</td>
<td>Emotion in design &amp; activity (#9)</td>
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<tr>
<td>11/13</td>
<td>Research article 5 &amp; 6 summaries (groups of 3 only)</td>
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<tr>
<td>11/13</td>
<td>Presentation/paper decision deadline (off-campus students)</td>
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<table>
<thead>
<tr>
<th>WEEK 13</th>
<th>Week 13 Events</th>
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<tbody>
<tr>
<td>11/18</td>
<td>Project peer-review activity</td>
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<tr>
<td>11/20</td>
<td>--- No class ---</td>
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<td>Thanksgiving Break 11/25-11/29</td>
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<table>
<thead>
<tr>
<th>WEEK 14</th>
<th>Week 14 Events</th>
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</thead>
<tbody>
<tr>
<td>12/2</td>
<td>Research project presentations</td>
</tr>
<tr>
<td>12/4</td>
<td>Research project presentations</td>
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<table>
<thead>
<tr>
<th>WEEK 15</th>
<th>Week 15 Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/9</td>
<td>Research project presentations</td>
</tr>
<tr>
<td>12/11</td>
<td>Research project presentations</td>
</tr>
<tr>
<td>12/9</td>
<td>Papers due for off-campus students who choose this option</td>
</tr>
<tr>
<td>12/11</td>
<td>Papers due for off-campus students who choose this option</td>
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