

## HTI 100 – Innovation for People and Computers (3 credits)

### Semester I 2017-2018

Introduction to the field of human-computer interaction (HCI) and the innovative process. Includes current and historical aspects of HCI with an emphasis on psychology and sociology in an increasingly technology-driven society.

### Course information

<b>Class meetings</b>	Section 4: Tuesdays & Thursdays, 12:30 PM – 1:45 PM, SCI D228
<b>Final exam time</b>	Section 4: Tuesday, 12/19/2017, 8:00 AM – 10:00 AM, SCI D228
<b>Instructor</b>	Tomi Heimonen, PhD
<b>Office location</b>	B235, Science Building
<b>Email</b>	theimone@uwsp.edu
<b>Telephone</b>	(715) 346-2356
<b>Communication</b>	You are encouraged to contact me (email preferred) regarding the course if you have any questions. When communicating via email, please preface the subject line of your email with "HTI 100".
<b>Office hours</b>	<p>Mondays and Wednesdays, 1:00 PM – 2:00 PM</p> <p>Tuesdays and Thursdays, 11:00 AM – 12:00 PM</p>
<b>Class website</b>	<p><a href="http://www.uwsp.edu/d2l">http://www.uwsp.edu/d2l</a></p> <p>Desire2Learn (D2L) will be used to distribute course materials, assignments and grades. Check it regularly to stay informed of changes to class schedules and other important announcements.</p>
<b>Prerequisites</b>	There are no prerequisites for this course.
<b>Textbooks</b>	<p>The following required texts will be used in this course. Textbooks are available at Text Rental.</p> <p>Don Norman: <i>The Design of Everyday Things, Revised and Expanded Edition</i>, Basic Books, 2013. ISBN: 978-0-465-05065-9</p> <p>Jenny Preece, Yvonne Rogers and Helen Sharp: <i>Interaction Design: Beyond Human-Computer Interaction</i>, Wiley, 4<sup>th</sup> edition. ISBN: 978-1-119-02075-2</p>

**Important:** This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check D2L for corrections or updates to the syllabus. Any changes will be clearly noted in class, in a course announcement and/or through email.

### Course overview

This course explores the creation of innovative products, technologies and services through a survey of human-computer interaction (HCI) and a hands-on innovation project. We'll examine the human-centered design process, including the understanding of users' characteristics, needs, and goals, innovation methods, and presentation and communication of design artifacts.

This is the foundational course within the Human-Technology Interaction (HTI) major. During the course, we will explore how humans feel, think and perceive, and how their abilities and limitations affect how they interact with technology. We will survey the history of HCI, from the first computer mouse and graphical user interface to current technologies, and discuss the social, legal and ethical aspects of designing digital products. By the end of the semester, you will be able to turn your ideas into a user focused interactive product concept and demonstrate it to others.

## Learning outcomes

This is a Social Sciences designated course in the General Education Program (GEP). The credits you receive in this course will help satisfy UW-Stevens Point's GEP requirements.

### UW-Stevens Point GEP Social Sciences learning outcomes:

1. Explain or apply major concepts, methods, or theories used in the social sciences to investigate, analyze, or predict human behavior (aligns with HTI Major competencies #1 and #3 below)
2. Examine and explain how social, cultural, or political institutions influence individuals or groups (aligns with HTI Major competencies #2 and #4 below)

### HTI Major Competencies:

Computing and New Media Technologies faculty members at UW-Stevens Point have developed a set of program competencies that define the educational goals of the CNMT Department and the HTI major itself. No single HTI course can cover all the HTI major competencies, but the combined courses within the major meet all of these goals. This course is designed to help you meet the following program competencies:

1. Design Knowledge and Skills: Achieve an industry-standard level of knowledge and skills in human-centered design and assessment of digital media (aligns with Course Objectives #2, #3, #4 and #5 below)
2. Interdisciplinary Knowledge and Skills: Demonstrate an ability to contribute to, and act as the end user's advocate across, all disciplines involved in a professional digital development team (aligns with Course Objectives #3 and #5 below)
3. Contextual Knowledge & Values: Demonstrate the ability to identify and shape digital artifact development based on human-centered cultural, technical, and ethical issues (aligns with Course Objectives #1, #2 and #5 below)
4. Personal Communication Skills: Demonstrate industry-standard communication skills throughout all phases of the digital artifact development process; including research, stakeholder interactions, results presentations, and team problem solving in both distance and face-to-face environments (aligns with Course Objective #4)

Upon completing this course, students will have:

1. Demonstrated basic understanding of the key developments and milestones in the history of interactive technologies and how they affected society
2. Demonstrated ability to apply the key characteristics of human cognition, memory and perception in design and to explain how these affect how people use technology
3. Applied human-centered design methods to generate, develop and document ideas for interactive products and services
4. Demonstrated ability to collaborate with and present to team members and the class
5. Demonstrated basic understanding of key legal and ethical issues related to the design of interactive technologies

## Grading policy

### Graded course activities

Completing coursework awards a maximum total of 100 points.

Specific requirements for each graded course activity will be announced separately in class and in D2L.

**Assignments and homework:** Each homework problem and course assignment will be valued separately as designated in its documentation (35 points total). Homework and assignments help you familiarize with and practice the concepts, methods and techniques introduced in the readings and other course materials. You must be prepared to demonstrate your solutions in class on request.

**Course project:** The course project awards a total of 40 points. By completing the project, you will demonstrate your competence in applying the knowledge and skills gained during class to ideate and design an innovative product or service concept that addresses specific user needs.

**Exams and quizzes:** In-class exams and online quizzes will be scheduled periodically to assess your understanding of the course materials (25 points total). Exams and quizzes will cover the assigned textbook readings, content introduced in course materials and topics discussed in class.

### Late policy

Coursework (assignments, homework, project, exams and quizzes) must be submitted by the given deadline or an extension must be requested from the instructor **before the due date**. If you know ahead of time that you will have a legitimate reason for missing a due date, contact the instructor to discuss an extension.

Coursework that is turned in late will receive a 20% reduction in points awarded. Submissions that are more than 3 days late will receive 0 points.

The instructor reserves the right to adjust this policy to account for extraordinary situations, such as documented illness or medical emergencies. You are required to inform the instructor as soon as possible of such situations but **at most within five work days of the due date** in question.

### Grading scale

The final grades will be determined as a percentage of points earned out of 100 points according to the following scale:

Grades	Percentage	Grades	Percentage	Grades	Percentage
A	94.00% – 100.00%	B-	83.99% – 81.00%	D+	70.99% – 68.00%
A-	93.99% – 91.00%	C+	80.99% – 78.00%	D	67.99% – 64.00%
B+	90.99% – 88.00%	C	77.99% – 74.00%	F	< 64%
B	87.99% – 84.00%	C-	73.99% – 71.00%		

The instructor reserves the right to revise the grade cutoffs to be more generous if necessary based on overall class performance.

### Viewing grades in D2L

Points you receive for graded activities will be posted to the D2L Grade Book. Online grades are updated once a grading session has been completed – typically within 4-5 work days following the completion of an activity. You will see a visual indication of new grades in D2L.

## Course policies

### Participation

Students are expected to complete all course activities as outlined in this syllabus and in D2L to earn a passing grade. You are expected to check your UWSP email and the course D2L instance daily to keep up-to-date on course related announcements.

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. Being proactive in informing your instructor when difficulties arise during the semester helps us find a solution easier.

### Completing coursework

You will complete a variety of coursework during this course, which help you gain a deeper understanding of the topics discussed in class. All coursework must be submitted **electronically through D2L**, unless otherwise instructed.

When working in groups, for grading purposes each group member must submit the coursework to D2L, unless otherwise instructed.

All coursework requirements and due dates will be announced in class and D2L, along with further instructions. It is your responsibility to check D2L for assignments and material distributed in class.

Please note that originality checking by Turnitin.com is integrated in D2L and it may be used to review any writing assignment(s) you submit.

### **Peer feedback**

You may be asked to review and provide feedback on the work created by your peers. When doing so, please remember that the objective is to critique the work, not the person. Criticism or discrimination against a person based on gender, race, ethnic background, religion, or sexual orientation will be subject to the University's disciplinary procedures and will also result in deduction of points on the course. For more information on the university's discrimination policy, see <http://www.uwsp.edu/dos/Pages/Discrimination%20Policy.aspx>

### **Teamwork**

Some of the coursework activities will be completed in teams of 2-3 students. Each member of the group is responsible for completing the assigned work to the best of their ability.

For each coursework activity carried out as a group, the groups are required to submit a work plan with the instructor. The work plan details the responsibilities of each group member in completing the coursework. The work plan may be used as the basis for grading and conflict resolution.

### **Dropping/withdrawing from the course**

It is the student's responsibility to understand when they need to consider un-enrolling from a course. Refer to the UWSP Academic Calendar for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons include, but are not limited to, the following: documented and severe physical/mental illness/injury to the student or student's family. Please consult the instructor at the earliest opportunity to discuss the need to drop the course after the mandated deadline.

### **Incomplete policy**

Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if inability to complete the coursework was due to a documented illness/injury or other circumstance beyond the student's control. All incomplete course assignments must be completed by the end of Semester II 2017-2018.

### **Software requirements and file storage**

There are no specific software requirements on this course. The software used during this course will be either freely available online, available in the UWSP Application Center or installed in labs.

Storage media (e.g., flash drive or external hard drive) or cloud-based storage will be useful to store and transport the files created during this course. Note that the classroom does not have individual computer workstations, so plan accordingly.

### **Technology use in class**

Cell phones and other mobile devices may not be used in class for activities other than those related to the class, such as trying out demos and new technologies on your phone or tablet.

If you wish to record (audio or video) the class meetings, please consult the instructor first.

## Accommodations

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability and Assistive Technology Center on the 6th floor of Albertson Hall (library) as soon as possible. DATC can be reached at 715-346-3365 or DATC@uwsp.edu.

## Student academic disciplinary procedures

### UWSP 14.01 Statement of principles

The board of regents, administrators, faculty, academic staff and students of the university of Wisconsin system believe that academic honesty and integrity are fundamental to the mission of higher education and of the university of Wisconsin system. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

### UWSP 14.03 Academic misconduct subject to disciplinary action

- (1) Academic misconduct is an act in which a student:
  - a. Seeks to claim credit for the work or efforts of another without authorization or citation;
  - b. Uses unauthorized materials or fabricated data in any academic exercise;
  - c. Forges or falsifies academic documents or records;
  - d. Intentionally impedes or damages the academic work of others;
  - e. Engages in conduct aimed at making false representation of a student's academic performance; or
  - f. Assists other students in any of these acts.
- (2) Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

Specific allowances for using content created by others are explained in the coursework instructions. Standard citation and acknowledgment practices apply when utilizing third party content, such as text, images, video, and program code. If in doubt, consult the instructor in advance.

## Emergency preparedness

In the event of a medical emergency call 9-1-1 or use Red Emergency Phone located near B338. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure in the basement of the Science building. See <http://www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx> for floor plans showing severe weather shelters on campus. Avoid wide-span structures (gyms, pools or large classrooms).

In the event of a fire alarm, evacuate the building in a calm manner. Meet at the entrance of the Health Enhancement Center across the street from the Science building. Notify instructor or emergency command personnel of any missing individuals.

**Active Shooter/Code React – Run/Escape, Hide, Fight.** If trapped hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders. See UW-Stevens Point Emergency Procedures at <http://www.uwsp.edu/rmgt/Pages/em/procedures> for details on all emergency response at UWSP.

## Tentative class schedule

**Week 01:** Syllabus review, Introduction to interaction design

**Week 02:** Interaction design (continued), usability and user experience

**Week 03:** History of HCI

### Quiz 1

**Week 04:** Conceptual models & metaphors – Defining what the system can do

**Week 05:** Types of interaction – How people can interact with products

**Week 06:** Cognition, memory and thinking – How people understand the world

**Week 07:** Social interaction

### Midterm exam

**Week 08:** Emotional interaction

**Week 09:** Interface types

**Week 10:** Human-centered innovation – designing novel products for people's needs

**Week 11:** Methods for gathering and recording ideas

### Quiz 2

**Week 12:** Methods for innovation and ideation (Thanksgiving week – no Thursday class)

**Week 13:** Accessibility – Making technology usable by all

**Week 14:** Ethical aspects of technology design

Copyright and licensing

**Week 15:** Project presentations

**Week 16:** Final exam

**Important Note:** Refer to the D2L course calendar and dropbox details for specific due dates for coursework. If you have any questions, please contact your instructor.