CIS 1410 – Introduction to Human Computer Interaction – Course Syllabus

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Course Name:

https://www.cod.edu/faculty/websites/england/index.aspx

e-mail: england@cod.edu

Credit and Contact Hours: 3 semester credit hours (3 lecture hours)

Prerequisites: CIS 1400 – Programming Logic and Technique OR

equivalent

Textbook (Required):



CIS 1410 – Introduction to Human Computer Interaction

<u>Designing the User Interface: Strategies for Effective</u>
<u>Human-Computer Interaction</u> by Ben Schneiderman,
Publisher: Pearson Education, 6th Edition, ISBN-13:
978-0-13-438038-4.

Other Course Materials:

Freely available Adobe Acrobat Reader for completing assignment forms, software for creating digital versions of design documents, assignment submission material in digital format (student should keep backup copies).

MS Office 365 is available free for COD student use.

Course Description:

Introduction to basic concepts in theory and practice of (HCI) Human Computer Interaction, a discipline concerned with design, implementation, and evaluation of interactive computing systems for human use. Emphasis is on the structure of communication between consumers and computers, capabilities of people to use computers, and concerns that arise in the process of designing and building interfaces between humans and computers. Particular focus is placed on practical design and usability between people and computing systems. Repeatable for credit: No

CIS 1410 Sec NET01

Location: Online

SPRING SEMESTER 2024

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Course Objectives:

Upon successful completion of this course, the student should be able to:

- 1. Introduce concepts and history of (HCI) Human Computer Interaction
- 2. Explain importance of HCl for interactive computing system design
- 3. Summarize a variety of user research and evaluation techniques in HCI
- 4. Discuss principles of user centered design
- 5. Recognize role of human factors in system usability
- 6. Apply HCI principles to (UI) User Interface design
- 7. Explain methods for evaluating UI effectiveness

Topical Outline:

- 1. History and importance of (HCI) Human Computer Interaction
 - a. User centered design
 - b. Human factors
- 2. Ongoing research studies in HCI
- 3. Interaction of hardware and software in HCI
- 4. User differences in design
 - a. Physical limitations
 - b. Age
 - c. Cultural
 - d. Social
- 5. UI (User Interface) metaphors
 - a. Direct manipulation
 - b. Immersive environments
 - c. Navigation and organization
 - d. Language and speech
 - e. Devices
- 6. Interface mockups
 - a. Paper
 - b. Wireframe designs
 - c. Storyboarding
 - d. Prototyping
- 7. Evaluating user experience
 - a. UI design
 - b. Expectations and consistency
 - c. Response times
 - d. Acceptance testing

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Course Requirements

Academic Honesty

Course related academic integrity is an important component of College policies and the Computer Information Science curriculum.

Student academic dishonesty includes but is not limited to:

- Dishonest use of course materials, such as student papers, examinations, reports and material posted on the Internet.
- Knowingly posting course materials of any kind on Internet sites such as (*but not limited to*) Course Hero and Chegg without the consent of the instructor.
- Knowingly assisting others in the dishonest use of course materials such as student papers, examinations and reports.
- Knowingly providing course materials such as papers, lab data, reports and/or electronic files to be used by another student as that student's own work.
- Plagiarizing, i.e., using language or ideas from materials without acknowledgement and/or copying work from other sources and submitting it as one's own. This includes the use of generative Al resources.
- Examples of plagiarism include but are not limited to:
 - Copying a phrase, a sentence, or a longer passage from a source (including an Internet source) and submitting it as one's own.
 - Summarizing or paraphrasing someone else's ideas without acknowledging the source.
 - Submitting group assignments individually as one's own independent work.
 - Copying or taking pictures of course materials such as videos, exams, quizzes or assignments
 and posting the copied items and/or pictures on the Internet or sharing these copied items
 and/or pictures with other students who have not yet completed the assignments.
 - Taking pictures or copying course materials that are considered confidential by the instructor such as exams or guizzes.

Coursework submitted by the student that is either found online, significantly similar to other submitted work, or violates any of the above conditions, is subject to one or more of the following:

- Grade of 0 for the assignment
- Failing grade for the course
- Completion of Academic Dishonesty Form for recording in the Judicial Database

The College policy on academic integrity can be found in the College catalog under Student Rights and Responsibilities, Code of Academic Conduct:

https://catalog.cod.edu/student-services-general-student-information/

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Access and Accommodations

The College of DuPage is committed to the equitable access of educational opportunities for students with disabilities in accordance with The Americans with Disabilities Act, As Amended and Section 504 of the Rehabilitation Act of 1973. Any student who feels they may need an accommodation on the basis of an illness, injury, medical condition, or disability should contact the Center for Access and Accommodations to determine eligibility for accommodations and to obtain an official Letter of Accommodation.

Connecting with the Center for Access and Accommodations is an important way to make sure that any student who has a need based on a disability, illness, injury, or medical condition is provided with appropriate accommodations. The Center for Access and Accommodations can be reached via email at access@cod.edu.

Students may also initiate a request for services by going to www.cod.edu/access and clicking on the green box labeled "complete form to request accommodations." If you are already registered with the Center for Access and Accommodations, please email me your Letter of Accommodation within two weeks (14 calendar days) of the start of the semester or within one week (7 calendar days) of receipt of an official Letter of Accommodation to ensure proper course accommodations are in place. Please include the course and section number with your email so the proper accommodations can be made for the indicated course. Please DO NOT send any private health documentation or Doctor's notes to me.

e-mail

Every attempt will be made to answer e-mail on a 24 hour turnaround basis (during the Monday through Friday week; weekend messages will be responded to during the next scheduled office hour). When sending an e-mail please indicate your name, in which course you are currently enrolled, the problem you are having, and how best to contact you with a resolution.

Grading Policy: Lab Assignments

Each topic contains a lab assignment. The lab assignment is a **fill-in pdf form** that you can use the freely downloadable **Adobe Acrobat Reader 7.0** or greater to complete. To achieve the maximum points for any topic lab assignment, the following requirements should be followed:

- 1. Assignments should be completed by downloading the pdf form for the appropriate topic, using Adobe Acrobat Reader (or Evince Document Viewer on Linux) to include the student's name at the top and complete any questions in the given text boxes. Assignment forms missing a name can lose up 10% of possible assignment points.
- 2. The pdf form should be saved (using Adobe Acrobat Reader) with the student's initials (remember to keep the pdf extension). For example, a student by the name of Peter John Perfect would use the following name for topic assignment number 1:

PJPTopic1.pdf

Make sure your answers are saved and viewable by Adobe Acrobat Reader before submitting the form. If the form answers cannot be viewed by Adobe Acrobat Reader, they will not be graded and the student will receive a grade of 0 for the assignment.

Completion of the assignment form with a product other than Adobe Acrobat Reader often leads to non-viewable answers, disabled point boxes, or forms without the ability to save grading feedback. To check if answers are viewable and with Adobe Acrobat Reader, right-click the pdf assignment file icon and select "Open with" to select Adobe Acrobat Reader and verify your completed selections and a total of 0.0 for the ungraded assignment points. Verify that grading feedback can be included on your submitted form by selecting "File > Save" or "File > Save As" to ensure instructor feedback can be included. If the form cannot be saved by Adobe

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Acrobat Reader, there will be **no grading feedback** included for the student. Multiple submissions of assignments without the ability to add grading feedback will result in a 10% grading penalty for each assignment.

- 3. Be sure to include any needed data, design, or resource files as indicated in the assignment instructions. All assignment files (data, design, or resource files) should be bundled into a single .zip file for final assignment submission. Additional files not required for the assignment submission, or files bundled in a format other than .zip, will receive a grade of 0 for the assignment.
- 4. All assignments should be submitted (i.e. attach file and select 'Submit' button) by the assigned due dates/times in order to get full credit. Once the due date has passed, the submission link is removed from Blackboard and the lab can no longer be submitted through Blackboard for class credit.
 - In the event that ANY student experiences an unforeseeable circumstance that causes them to miss an assignment due date (EXCEPT THE LAST ASSIGNMENT OF THE COURSE), the student is given a 1 time option to complete their assignment within one week (7 calendar days) of the original due date if the instructor is notified within 72 hours (3 calendar days) via email of the original due date to activate this option AND the student obtains an email confirmation from the instructor upon receipt of the late assignment within 72 hours (3 calendar days) of the student's assignment email submission. The assignment will be graded within 2 weeks (14 calendar days) of the late submission date and have a recorded grade of 0 until the last week of the semester. After all other assignments for the semester have been submitted on time in the proper format, the student's grade for the late assignment will be updated to reflect the earned points during the last week of the semester.
- 5. The student is encouraged to get clarification and assistance with any difficulties related to the assignment. There are several options available to the student (allow 24 hour turnaround for question response during the Monday to Friday week--weekend questions will be responded to during the next scheduled office hour):
 - Blackboard discussion board
 - direct contact with the instructor via e-mail or scheduled meeting during office hours

Grading Policy: Discussion Board Posts

There are several discussion board posts where students will further research course concepts and report results via a graded discussion board post, in classroom discussion, and/or student created video. Student created videos must be uploaded to the College's YuJa webserver and the YuJa link made available with the assignment for grading. Follow posting instructions to maximize potential points. Once the due date/time has passed, the submission link is removed from Blackboard and the post can no longer be submitted through Blackboard for class credit.

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Grading Policy: Projects

Students will complete **two** design projects demonstrating their cumulative knowledge of course concepts in a **team-based project environment**. Course projects will require **collaboration among the team members** as well as periodic **team meetings with the instructor** on work progress. Students not attending team meetings (in class or virtual) **may lose a portion of their project participation points for non-attendance**.

Students will also perform **peer reviews** of submitted projects. Depending upon course instructional format, projects will include an in class or video presentation for viewing and grading.

Project teams will be identified and project assignments made available (at least) two weeks prior to their due dates. Once the due date/time has passed, the submission link is removed from Blackboard and the project can no longer be submitted through Blackboard for class credit.

Grading Policy: Quizzes

Each topic contains a quiz. To achieve the maximum points for any topic quiz, the following guidelines should be applied:

- 1. Allow yourself enough time to complete the quiz in one sitting by the due date/time. Quizzes should be completed within the designated time limits and submitted by the due date/time. An overage of 1 or 2 minutes is allowed. Completion times greater than 5 minutes over the designated time limit will have points deducted from the final score (i.e. 10% of total possible quiz points for each 5 minute overage). Quizzes submitted more than 5 minutes after the due date/time will have points deducted from the final score (i.e. 10% of total possible quiz points for each 5 minute overage).
- 2. Click the **"Save"** button periodically to save your responses should you accidentally disconnect from Blackboard. This will allow some of your answers to be recorded.
- 3. The quiz clock runs from the time you first select "**Start**" to the time you click "**Submit**", regardless of whether the quiz is visible in your Browser. This implies that the **quiz clock does not stop running** if you decide to quit and come back later to complete the quiz.
- 4. Click the "Submit" button when you have completed the quiz. Quiz submission links on Blackboard are visible only until their due dates. Once the due date/time has passed, the quiz submission link is removed from Blackboard and the quiz can no longer be submitted through Blackboard for class credit.
- Review additional recommendations found in "Tips for Taken an Exam" (http://www.cod.edu/it/blackboard/TipsforExams.html).

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Grading Policy: Method of Student Assessment

Points are distributed in the following manner:

Category	Possible		
Lab Assignments	400		
DB Postings	150		
Quizzes	350		
Projects	100		
Total	1000		

The total possible course points for students in each category (and reflected on Blackboard) **may be** greater than listed above. Each student's calculated grade will be evaluated using the above possible total points. Any additional (i.e. above the possible in each category) points earned by the student will count towards overall extra credit in the course.

Final Grades are earned using the following scale:

Accumulated Points	Grade	Percentage	
900 – 1000	Α	>= 90	
800 – 899.9	В	80 – 89	
700 – 799.9	С	70 – 79	
600 – 699.9	D	60 – 69	
599.9 or lower	F	< 60	

Satisfactory/Fail/Incomplete

No Satisfactory/Fail/Incompletes will be given in this course.

The College policy on Satisfactory/Fail (S/F) Grade Option can be found in the College catalog under Academic Policies and Procedures, Earning College Credit:

https://catalog.cod.edu/academic-policies-procedures/

Student E-mail Accounts

Much of the correspondence for this course will occur via discussion boards, announcements, and file uploads. However, all COD students are issued a myACCESS user id that gives access to a variety of college information services. If you have not used myACCESS before, use the following link to get more information about myACCESS and Student Planning:

https://www.cod.edu/registration/myaccess-student-planning.aspx

The following site provides access to a variety of resources on how to get started using myACCESS and Student e-mail.

https://www.cod.edu/student_life/resources/information_technology/email/email_guide.aspx

The student is responsible for periodically monitoring their COD student e-mail account for any course related and/or official communication from the instructor.

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Student Responsibilities

This course involves lecture, reading, online research, discussions, assignments, and quizzes. All courses require a **regular weekly** time commitment from the student in order to be successful. Recommendations estimate that for each credit hour, students should expect to spend an additional 2-3 hours doing homework, readings, and discussions. For example, a 3-credit hour class would require 3 hours of class time, plus 6-9 hours of study, resulting in 9-12 hours total weekly investment.

Students experiencing difficulty with course material have the following available options for extra assistance:

- request instructor assistance through email or an appointment during scheduled office hours.
 Every attempt will be made to answer e-mail on a 24 hour turnaround basis (during the Monday through Friday week; weekend messages will be responded to during the next scheduled office hour). When sending an e-mail please indicate your name, in which course you are currently enrolled, the problem you are having, and how best to contact you with a resolution.
- utilize assistance and tutoring resources available through the Institution Page upon Blackboard login and through the "Assist" menu link in Blackboard

Withdrawal Policy

The last day to withdraw from this class is **04/14/2024**. After that date, students may file a Petition for Late Withdrawal through the Registration Office. Petitions for Late Withdrawal will be granted for extenuating circumstances only, including student illness, death in the immediate family, family emergencies, call to active duty, or other appropriate extenuating circumstances. The student will be required to provide appropriate documentation for all requests for Late Withdrawal. Prior to withdrawing from this class, students are encouraged to speak with the instructor.

The College policy on Withdrawals can be found in the College catalog under Academic Policies and Procedures, Course Withdrawals and Specialized Registration:

https://catalog.cod.edu/academic-policies-procedures/

Finally

Most students sign up for courses with the best intentions; however, circumstances can arise that challenge even the best students. Successful course completion is a combined effort between instructor and student. It is my personal goal to assist all students in learning and practicing course objectives throughout the semester to achieve material comprehension beyond the end of the semester. This is only accomplished with your help. If you are having difficulty with the course, the above requirements, or the College, please inform me as soon as possible (before a crisis develops) so that we can resolve them in a timely manner beneficial to all persons involved. While it may be 'tempting' to acquire problem solutions from an alternate source and submit them as one's own in order to meet assigned due dates, it is not in a student's best interests to do so.

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Tentative Course Schedule and Due Dates

To ensure successful course completion in a timely manner, various deadlines have been set. The deadlines set forth below are firm deadlines, which will not be extended except for the one time late lab submission option as outlined under Grading Policy: Lab Assignments. The deadline time for each listed day is 11:30pm.

Use the Blackboard "Course Material" menu item to access the individual topics. *Most* components of a topic are available on the first day of the semester; however, Discussion Board Postings, Assignments, Projects, and Quizzes are available only until their listed Due Dates. Once the due date/time has passed, the submission links are removed from Blackboard and the postings/assignments/projects/quizzes can no longer be submitted through Blackboard for class credit.

The wise student will complete Discussion Board posts, submit Assignments, submit Project material, and complete Quizzes earlier than their due dates. All grading for Discussion Board posts, Assignments, Projects, and Quizzes will commence **after** the assigned due dates. **A minimum of two week turnaround for grading of Discussion Board posts, Assignments, Projects, and Quizzes can be expected.**

Week	Topic/Textbook Chapters	DB Post Due Date (11:30pm)	Assignment Due Date (11:30pm)	Quiz Due Date (11:30pm)
1	Intro Video Posting	Thu, Jan 25, 2024		
2	Topic 1: Intro to HCI Ch 1 Usability of Interactive Systems	Thu, Feb 1, 2024	Fri, Feb 2, 2024	Sat, Feb 3, 2024
3	Topic 2: Universal Usability Ch 2 Universal Usability	Thu, Feb 8, 2024	Fri, Feb 9, 2024	Sat, Feb 10, 2024
4	Topic 3: Guidelines, Principles, and Theories Ch 3 Guidelines, Principles, and Theories	Thu, Feb 15, 2024	Fri, Feb 16, 2024	Sat, Feb 17, 2024
5	Topic 4: Design Ch 4 Design	Thu, Feb 22, 2024	Fri, Feb 23, 2024	Sat, Feb 24, 2024
6	Topic 5: Evaluation and the User Experience Ch 5 Evaluation and the User Experience	Thu, Feb 29, 2024	Fri, Mar 1, 2024	Sat, Mar 2, 2024

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Week	Topic/Textbook Chapters	DB Post Due Date (11:30pm)	Assignment Due Date (11:30pm)	Quiz Due Date (11:30pm)
7	Topic 6: Direct Manipulation and Immersive Environments Ch 7 Direct Manipulation and Immersive Environments		Fri, Mar 8, 2024	Sat, Mar 9, 2024
8	Project 1 Team Meetings	signups 3/11-3/12; meetings 3/13 and 3/14; times TBA		
9	Project 1 Presentations	Thu, Mar 21, 2024 <i>(11:30pm BB upload)</i>		
9	Project 1 Peer Reviews	Sat, Mar 23, 2024 (11:30pm BB upload)		
10-11	Topic 7: Fluid Navigation (2 weeks) Ch 8 Fluid Navigation		Fri, Apr 5, 2024	Sat, Apr 6, 2024
12	Topic 8: Expressive Human and Command Languages Ch 9 Expressive Human and Command Languages		Fri Apr 12, 2024	Sat, Apr 13, 2024
	Last Day to Withdraw From Class	Sunday, Apr 14, 2024		
13	Topic 9: Devices Ch 10 Devices		Fri, Apr 19, 2024	Sat, Apr 20, 2024
14-15	Topic 10: Data Visualization (2 weeks) Ch 16 Data Visualization		Fri, May 3, 2024	Sat, May 4, 2024
16	Project 2 Presentations	Thu, May 9, 2024 <i>(11:30pm BB upload)</i>		
16	Project 2 Peer Reviews	Sat, May 11, 2024 <i>(11:30pm BB upload)</i>		
17	Course Final Summary and Feedback	Fri, May 17, 2024		