GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
Instructional Design and Technology Program

EDIT 732 Section DL4: Analysis and Design of Technology-Based Learning Environments
3 Credits, Fall 2018
4:30-7:10pm/Wednesdays Fairfax Campus – East Building 121

Faculty:

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Prerequisites/Corequisites – EDIT 730 or permission of instructor

University Catalog Course description:

Enables design, implementation, and evaluation of technology-based education and training materials using advanced computer-based authoring tools.

Course Overview:

This course will provide students with opportunities to experience the instructional design and user experience design process as applied to the conceptual prototype of a technology-based learning system or interface design. Students may have the opportunity to interact with clients, subject matter experts, target audience members and draft a comprehensive user experience design approach as well as prototype their ideas using selected technology software tools. The course will be focused on facilitating connections between interdisciplinary approaches of user experience prototyping, design and development of teaching and learning systems/interfaces from multiple disciplines including instructional design, computer science, human computer interface and related fields.

Course Delivery Method:

This course will be delivered online (76% or more) using an asynchronous format via the Blackboard learning management system (LMS) housed in the MyMason portal, several synchronous sessions using WebEx and other collaboration tools. You will log in to the Blackboard course site, WebEx using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on August 27, 2018 at 12noon.

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Technical Requirements

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with a standard up-to-date browsers. To get a list of Blackboard's supported browsers see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers

  To get a list of supported operation systems on different devices see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems

- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students will need a video camera/capability for use with Blackboard, WebEx and Collaboration tools and may wish to utilize an external microphone (rather than the internal computer microphone) if needed for creating the required video presentation
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
  The following software plug-ins for PCs and Macs, respectively, are available for free download: [Add or delete options, as desire.]
  - Adobe Acrobat Reader: https://get.adobe.com/reader/
  - Windows Media Player: https://support.microsoft.com/en-us/help/14209/get-windows-media-player
- Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations

- Course Week**:** This course is a hybrid course which means it encompasses face-to-face as well as online sessions which may be asynchronous (not in real time) or synchronous (in real time) sessions designated by the instructor.
  - Asynchronous: Because hybrid/asynchronous courses do not have a "fixed" meeting day, our week will **start** on Wednesday, and **finish** on Tuesday.
- Log-in Frequency: Students must actively check the course Blackboard site, designated collaboration site and their GMU email for communications from the instructor, teammates, class discussions, and/or access to course materials at least 3-4 times per week. In addition, students must log-in for all scheduled online synchronous meetings. Synchronous meetings may be scheduled as a replacement for some face to face or asynchronous classes in certain circumstances. Advanced notice will be provided by the instructor.
- Participation: Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence: Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues: Students should expect that they could experience some technical difficulties at some point in the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.

- Workload: Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of and complete the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support: Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- Netiquette: The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words.* Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations: Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes or Objectives

This course is designed to enable students to do the following:

1. experience the process of instructional design and development intersected with user experience design process as applied to a real-world project;
2. apply instructional design, learning theories, user experience design and interdisciplinary design principles to technology prototype development;
3. apply product development and user experience design life cycle methodologies to instructional design and development
4. collect and analyze user data related to iterative instructional design and development and user experience design processes.
5. contribute positively to the team's mission and goals and support of individual members and team members' professional growth and development
6. document individual's contributions to team's mission and goals
7. contribute to project management and accomplishment of goals
8. present a design prototype

Professional Standards (International Board of Standards for Training, Performance and Instruction (IBSTPI) :

Upon completion of this course, students will have met the following professional standards

1 Prof Foundations: Communicate effectively in visual, oral and written form.

4 Professional Foundation: Apply data collection and analysis skills in instructional design projects

6 Planning & Analysis: Conduct a needs assessment in order to recommend appropriate design solutions

and strategies

7 Planning & Analysis: Identify and describe target population and environmental characteristics

8 Planning & Analysis: Select & use analysis techniques for determining instructional content

9 Planning & Analysis: Analyze the characteristics of existing and emerging technologies and their potential use

12 Design instructional intervention

Required Texts:

1) Hartson, R. & Pyla, P.S. (2012) *The UX Book: Process and guidelines for ensuring a quality user experience.* Waltham, MA: Elsevier.

2) Parush, A. (2015). Conceptual design for interactive systems: Designing for performance and user experience. New York: Morgan Kaufmann.

Classroom: This class meets in a classroom that is not equipped with individual workstations and all students are required to "bring your own device" (BYOD) to class. This is typically a personal laptop or tablet. Due to the nature of some online tools that may be introduced, a laptop (Mac or Windows) or a tablet running Windows 8.1 or later would be optimal.

Course Performance Evaluation
Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

Assignments:

Participation/Teamwork Contributions to Group Process (30%)

This course requires significant online asynchronous, synchronous and face-to-face participation and interaction. Each member of small teams (5-6 people) will interact inside and outside of class to identify and explore a design challenge requiring the investigation, design and analysis of a technology-based learning environment. Each student will be expected to participate and contribute to each assignment in a self-selected, rotating role with each student taking leadership on one designated assignment (co-leadership can be facilitated if necessary to evenly distribute tasks). However, each student is also expected to individually contribute to all project deliverables and document their contribution in the team member evaluation form for each deliverable provided by the instructor. Students will initially self-evaluate what he or she can bring to the design group as a function of his or her knowledge, skills, capacities and preferences to be assigned to a design team and prime the group for cohesion and success. Successful collaboration and respectful, professional interaction among team members is a core competency of this course and will be facilitated by online team meetings (through Blackboard Collaborate or other web conferencing tool). Student design teams are expected to schedule at least one group meeting per week (beginning the second week of class) addressing their selected challenge. Student design team members may elect to assign rotating roles for each project deliverable assignment such as:

- Lead, Project Manager, Team Member, Worker
- Content Creator, Author, Content Processor, Reviewer, Editor
- Presentation Creator, Designer, Graphics, Applications
- Planner, Project Manager, Coordinator, Participant
- Mediator, Moderator, Facilitator, Proponent, Advocate,

- Representative, Contributor, etc. or other

As part of this course, students are expected to find ways to work online and face-to-face respectfully and successfully in their teams as would be expected in a consulting or professional position. Each student will complete a team member evaluation for each deliverable commenting on their own and their team members' contribution to the project deliverable. There will be six self/team member evaluations (TMEs) across the semester. This information is one of many points of data considered and triangulated by the instructor along with individual online presence and interaction as well as contribution to each team deliverable that will encompass individual grades. **The team member evaluation or TMEs will be submitted in Blackboard under the Assignments Link.**

User Interaction Design and Development (60%)

A small group of 5-6 students (referred to as your design team or group) will individually contribute to the collective purpose of initially identifying and investigating a design problem and context implementing user experience design processes, instructional design processes and related techniques to address the design problem. Student design teams will successfully negotiate this design challenge involving mobile or other technologies and teaching/learning/training (must be instructional related and not purely informational or entertainment driven) investigating specific content, context and device or interface design. Design groups will collaboratively progress through six project deliverables that will ultimately result into a current technology-based learning prototype for varying devices (e.g. mobile phone app, tablet app, Web-based learning environment mobile content, Internet of Things system or other device related to teaching, learning and training). The purpose of this assignment is to broaden your design skills and to investigate current technology as well as design processes and techniques that complement basic instructional design practice. The process will progress through the following detailed project deliverables:

1) **Project 1: Topic and client selection and product concept statement**

Student design teams will initially brainstorm design problem topics that may be familiar or interesting to them as well as identify client/organization contacts that may facilitate the collection of relevant information to fully investigate the formal or informal educational or training problem. Teams will write a brief (150 word) product concept statement that will do the following:

- Establish a client for your project.
- Establish a mobile product or other application system for which you will develop a significant user interaction design and conceptual prototype (a conceptual prototype to extend beyond or outside an existing software system in designing original components and structure).
- Negotiate with your team to discuss and determine project
- Get your client on board (make sure they are accessible) and target product or application system approved by the instructor. Earlier approval is better, in case you have to make some adjustments or find a different client.
- Write and refine (several times) a system concept statement for your target system and intersect with ISD and user experience design principles/processes.

This assignment will be submitted under the assignment link in Blackboard.

2) **Project 2: Contextual inquiry and analysis**

Contextual inquiry and analysis involves investigating the design challenge context. This context may encompass formal work-related environments or formal or informal education/museum/organization, etc. settings depending on the design challenge selected by the team. Regardless of the context, "user work activity data gathering" or user research processes will be employed by the team to uncover information about the context, setting, users, processes, content, etc. relevant to the selected design challenge similar in

nature to a needs analysis. This will require at least one personal field visit to the site or design context to observe and immerse yourself in the situation and empathize with the stakeholders' perspectives through interviews and observation necessary for a human-centered design experience. Teams will post their methods of investigation in preparing for the field visits/interviews, the protocol they plan to use for collecting data and methods of analysis based on the suggestions in the textbook and supplemental materials provided by the instructor. The data collected from the field visit and interviews will be captured, organized, posted and analyzed to glean insights for later modeling and design (posting documentation such as photos of process/context, notes, graphics, video etc is highly encouraged). A report of the team's planning, documentation and methods of analysis carried out and synthesized results will be posted in a brief report or description of processes as well as posted "work" activity affinity diagram (WAAD) and workflow or flow model that falls from the data collection and analysis.

This assignment will be submitted under the assignment link in Blackboard.

3) **Project 3: Requirements and modeling**

Extracting needs and requirements of your technology-based learning system/mobile device/interface design from the work activity affinity diagram demands a systematic, deductive approach based on what you have learned from prior contextual analysis. A focus on user needs or human-centered design processes is crucial to arrive at relevant requirements. Attention to the instructional design principles or constructs at this point is also important to fulfill the requirement of connecting the user experience design process to important instructional design principles that will embody your design. This project deliverable will result in at least 10 interaction, instructional and system requirement statements generated by your team in parallel, dyads or in whole team collaboration documenting the process. These requirement statements will be posted to the course site as well as emotional impact requirements and constraints. Requirements will then be prioritized and validated or reviewed with a stakeholder or participant reported on the course site.

Student teams will also construct varying design-informing models in this assignment depending on the design challenge and contextual analysis. Design teams may choose among user models and roles/classes, social models, usage scenarios/models, task structure models, task interaction models, use cases, work environment models, etc. based on their interpretation of the requirements for design. Representation of the modeling, as well as reporting of the needs and barriers to usage in a brief summary report should be posted for this project deliverable by the due date on the following calendar.

This assignment will be submitted under the assignment link in Blackboard.

4) **Project 4: Design**

The best design ideas can come from allowing yourself and your team to generate many design ideas, fluidly and rapidly. In the design phase, your team will generate either individually or together user personas and potential ideas that promote varying and wild ideas enhancing creativity and innovative directions for your design. Your team will post representation of your personas, ideation and sketching of multiple initial design ideas related to the personas for your design challenge. Showing a progression of your team's ideas is ideal here as they will morph and change or combine and define the eventual direction of your design. Consideration of the designer and user mental models and their differences is important during this phase as well.

A conceptual design using metaphors or ecological constructs to frame high level conceptual design with a system ecology, interaction or emotional impact perspective should also be posted for this deliverable represented by a graphic or drawing as well as storyboard sketching of more detailed interaction. Also, detailed interface design with annotated wireframes represent the maturation of your design ideas progression and will be posted on the course site.

This assignment will be submitted under the assignment link in Blackboard.

5) **Project 5: Prototype and Pilot Test**

Prototyping and pilot testing your design can be accomplished in many different ways. In this course, we will annotate and wireframe our design ideas but will also strive for the highest fidelity of prototyping possible given time and skill constraints. This will likely result in varying representations of prototypes across design teams which is appropriate as it may expand our understanding of different available tools and techniques for this part of the user experience design process. Many of the prototyping techniques described in the text are appropriate here such as physical mock-ups and paper prototypes progressing toward the use of current, software-based tools that each team can investigate. The important outcome is to show a progression of your prototype through an increasing fidelity of design demonstration or implementation.

Once your prototype is ready for primetime or testing out by a user, select a representative target audience member to try out each task that you have designed and gather their anecdotal feedback to record and report on the course site. This ensures some useful representative feedback on your design.

This assignment will be submitted under the assignment link in Blackboard.

6) **Project 6: Revised Prototype, Project presentation and TME**

The feedback that was obtained in your pilot test will result in documenting the feedback and final revisions of the prototype to be presented to your client. A successful client presentation is predicated on preparation, organization and practice. Clients and stakeholders of your projects will be invited to the course final presentation to hear about your process and see your prototypes during the semester. Teams are expected to prepare a 20 minute (depending on number of teams and allocated time) presentation with an informative slide show describing your user experience design process and progression toward your prototype. **The final performance-based assessment in this course is the submission of:**

1) **YOUR GROUP's REVISED PROTOTYPE AND PRESENTATION TO BLACKBOARD ASSIGNMENTS AREA and;**

2) **INDIVIDUALLY SUBMITTED PROJECT 6 TEAM MEMBER EVALUATION and;**

3) **A SEPARATE INDIVIDUALLY SUBMITTED PDF DOCUMENT COMPILING: 1) YOUR INDIVIDUAL PROJECT 6 TME; 2) YOUR GROUP PRESENTATION (required) AND; 3) PROTOTYPE (if possible) MUST be submitted UNDER THE ASSESSMENTS LINK IN BLACKBOARD IN THE TK-20 SYSTEM**. Please contact TK20help@gmu.edu for any questions related to the TK20 system assignment upload.

Other Requirements:

REQUIRED MID-SEMESTER and END of SEMESTER REFLECTION - Intersecting instructional design process with user experience design reflection

The remaining deliverable for this course is a three paragraph reflection on how the user experience design process intersects with the instructional design process based on each individual student's experience in the course. This will happen twice during the semester – once at the mid-point and once at the end of the semester. Reflection on the following is required at the end of the semester:

- how have you experienced the user experience design process to this point this semester?

- how does it intersect with the instructional design process?
- what would you do differently next time in your process?
- what suggestions might you have for improving the course or assignments at this point?

The reflections should incorporate both positive and negative statements if applicable. Please also describe any "aha moments" or significant understandings you experienced about the design process. This assignment will be submitted under the assignment link in Blackboard.

Grading/Course Performance Evaluation Weighting

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

- **Performance-Based Assessments -** This course includes performance-based assessments with allocated percentages and corresponding point values (listed in rubric at end of syllabus):

- **Assignments and Examinations – Grades in Blackboard (each deliverable technically worth 100 points for a total of 900 points but weighted with varying percentages) – are displayed as a running total point value. The User Interaction Design and Development – the core performance-based assignment, for example, has several components that each total 100 and *combined* are 60% of your grade. Therefore the running total point value you see on Blackboard will reflect the number of points you have earned *at that time* rather than your total grade for that *entire* assignment).**

Individual Participation/Teamwork Contributions to Group Process		30%
User Interaction Design and Development (Compiled PDF + Project 6 TME)		60%
Project 1: Topic and client selection and product concept statement	5%	
Project 2: Contextual inquiry and analysis	10%	
Project 3: Requirements and modeling	10%	
Project 4: Design	10%	
Project 5: Prototype and pilot test	15%	
Project 6: Revised Prototype, Project presentation and TME	10%	
Mid-Semester - Intersecting instructional design process with user experience design reflections		5%
End-of-Semester - Intersecting instructional design process with user experience design reflections		5%
Total percentage (referred to as points in individual items in rubrics below)		100%

Grading Policies

Your final grade will be based on the following scale:

A+ = 97-100 percent

A = 94-96 percent
A - = 90-93 percent
B+ = 87-89 percent
B = 84-86 percent
B- = 80-83 percent
C+ = 77-79 percent
C=74-76 percent
C=70-74 percent
F = <70 percent

Other Requirements/Instructor Availability

Due to intense nature of this blended project-based course, the instructor will release content progressively in the Blackboard course site typically the day of the course session (e.g. by Wednesday 4:30pm of specific class session content or sometimes earlier). Any course questions should be posted to the course question section on Blackboard for all class participants to view and benefit from the collaborative responses. The instructor will typically respond to the majority of questions/concerns on the day of the class allocated to that particular topic and remaining responses will likely occur periodically on Monday through Thursday. Please note: Response to questions/concerns posted on Friday through Sunday will typically require some additional turn-around time.

Participation/Group Project Process (30% of grade) for both in-class and online participation and contributions is located in Blackboard and described as:

- Outstanding contributor/team member: contributions reflect exceptional preparation and full participation in groups. Ideas offered are always substantive, providing one or more major insights as well as suggestions for group. Attended all group meetings (unless discussed with instructor), demonstrated exceptional effort on individual and lead tasks, exceeded individual contribution requirements and was instrumental in leading the group forward. Respectfully acknowledged and integrated all members' skills in project development process (e.g. according to Edmondson (2013) be accessible, acknowledge your own limits, display your own fallibility, invite others participation, frame failure as learning opportunity, use direct language and set boundaries). Worked as an excellent team group member and contributor. If this person were not a member of the group, the quality of project would be diminished markedly.

- Good contributor/team member: contributions reflect good preparation and full participation in groups. Good insights are always offered, providing one or more major ideas as well as suggestions for group. Attended all group meetings, demonstrated good effort on individual and lead tasks, met individual contribution requirements and was valuable in leading the group forward. Respectfully acknowledged and integrated all members' skills in project development process. Worked as a good team group member and contributor. If this person were not a member of the group, the quality of project would be diminished.

- Adequate contributor/team member: contributions reflect adequate preparation and adequate participation in groups. Some insights offered are occasionally, providing some ideas as well as suggestions for group. Attended majority of group meetings, demonstrated effort on individual and lead tasks, met individual contribution requirements. Respectfully acknowledged and integrated all members' skills in project development process. Worked as a team group member and contributor. If

this person were not a member of the group, the quality of project would be somewhat diminished.

- Unsatisfactory contributor/team member: contributions reflect inadequate preparation and adequate participation in groups. There are little insights/contributions offered as well as suggestions for group. Missed a significant amount of group meetings, demonstrated inadequate effort on individual and lead tasks, did not meet individual contribution requirements for group. Did not respectfully interact and acknowledge all members' skills in project development process. Did not work well as a team group member and contributor. If this person were not a member of the group, the quality of project would be unchanged.

Note: Students who do not participate or contribute will receive zero points in the applicable area.

Professional Dispositions

https://cehd.gmu.edu/students/polices-procedures/

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Class Schedule

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students. Due to the fluid, real-world and dynamic nature of the design process/context, the instructor reserves the right to change the syllabus/schedule during the course if needed based on project needs/requirements. Every effort will be made to keep students abreast of changes as soon as possible but professionalism and demonstration of your adaptive expertise as a designer/design researcher and flexibility in complex, real world projects is expected in this course.

WEEK	IN CLASS ACTIVITIES **Face-to-Face (F to F) Meetings are designated physical meeting times in East Building, Room 121** **During all asychnronous (Asynch) weeks, students are provided with required online resources to review and synthesize with readings and participate in required team activities.**	PREPARATION FOR FOLLOWING CLASS ACTIVITIES
1 Aug 29 **(Required F to F)**	Introduction Overview of Syllabus: Schedule and Requirements Discussion of asynchronous, synchronous and face to face session expectations Examples of Project Presentations Introduction to Design Opportunities Teaming Determine design teams	- Read Preface and Chapter 1 (Harson & Pyla – H&P) - Discuss project ideas for discussion and negotiate selection. Submit for instructor comment. - Review weekly course resources

	Team Information Exchange	
2 Sept 5 **(Required F to F)**	Introduction to WebEx and Spark Overview of intersection of UX design and ISD Framing Design Problems Co-creation and Creativity Mobile Design/Internet of Things Design Design Project Possibilities Team Discussions Schedule design team collaboration	- Read Chapter 2 (H&P) - Review weekly course resources - Discuss topic/client/project - Initial brainstorming of potential design problems, access to clients, constraints and context in design team discussions
3 Sept 12 **(Asynch)**	Project focus Lifecycle of User Experience (UX) Design Elaborating intersection of UX and ISD Needs analysis Generative Tools – Experience/Journey Mapping Things and Connected Devices: Pondering Design Issues Weekly Design Team Meeting Advance work in design teams to further planning and describe instructional/ training need, design problem synthesize resources, identify context of use, brainstorm ways to uncover client/partner and learner/user goals, problems, drivers, barriers, potential solution systems directions, etc. to inform upcoming contextual inquiry and analysis.	- Read Chapter 3 (H&P) - Come to consensus on selected design problem, client, access, constraints and context in online design team discussion - Each student research/investigate, contributes and reviews others' resources related to selected project to post in team area - Write Project 1 (150 word report and broad product concept statement following guidelines in H&P)
4 Sept 19 (Asynch)	Introduction to Contextual Inquiry, Analysis and Planning Overview of Ethnographic Methods in Design	- Read Chapter 4 (H&P) - Begin preparation/contact for contextual inquiry into design

	Planning for Interviews **PROJECT 1 Topic and client selection and product statement DUE** (posted online by end of day of class (12pm midnight Sept 23rd) with completed individual team contribution evaluation form. Weekly Design Team Meeting	problem/challenge (e.g. field visits and/or interviews) - Review weekly course resources
5 Sept 26 **(**Asynch**)**	More Contextual Inquiry and Analysis Understanding People and Context User journey/experience mapping Weekly Design Team Meeting Plan and Collect Contextual Inquiry Data – Come to next class with Data Weekly Design Team Meeting	- Read Chapter 5(H&P) - Begin to plan and conduct contextual inquiry into design problem/challenge (e.g. field visits and/or interviews) - Have some raw data for next class
6 Oct 3 **(F-to-F)** **(May be delivered in real time online - Synch)**	Contextual Analysis – in Process Work on Affinity Diagrams in Class (Required to come to class with Data) Design Requirements and Modeling Translating Research into Product Definitions Weekly Design Team Meeting	- Read Chapter 5(H&P) - Analyze raw data in class from contextual inquiry related to design problem/challenge (e.g. field visits and/or interviews)
7 Oct 10 (Asynch)	Continued Contextual Analysis: Consolidating and	- Read Chapter 6 (H&P) - Analyze data from contextual inquiry and write report

	Interpreting Work Activity Data Interaction Design Requirements Writing Requirement Statements Embedded Device Design Work in Teams to Analyze Data Weekly Design Team Meeting `	
8 Oct 17 (Asynch)	**PROJECT 2: Contextual Inquiry and Analysis Report DUE** with individual team contribution evaluation form. Design Informing Models User Roles, User Models and Personas Usage Models, Concerns, Barriers and Use Cases Examples of Experience/Systems Modeling Weekly Design Team Meeting	-Read Chapter 7 (H&P) - Read Chapters 1, 2 and 3 (Parush) -Begin requirements and modeling
9 Oct 24 **(**Asynch**)**	Design Thinking, Ideation and Sketching Continuing to draft requirement statements and modeling Intro to Layered Framework for Conceptual Model Weekly Design Team Meeting	- Read Chapter 8 (H&P) - Read Chapters 4-6 (Parush)

10 Oct 31 **(F to F)**	**PROJECT 3: Requirements and modeling DUE** with individual team contribution evaluation form. Mental Models and Conceptual Design Responsive and Responsible Design The Functional, Configuration and Navigation/Policy Layers and architecture In-class design session. Weekly Design Team Meeting	Read Chapter 9 (H&P) - Draft personas and ideas in sketches, graphics, etc. - Read Chapters 7-9 (Parush)
11 Nov 7 (Asynch)	**MID-SEMESTER REFLECTION DUE** Personas and Conceptual Design Intro to Prototyping and Wireframing Design Components The Detailed Layers and Components of Conceptual Model Weekly Design Team Meeting	- Read Chapter 11 (H&P) - Read Chapters 10-13 (Parush) - Draft personas and ideas in sketches, graphics, wireframing, storyboarding etc. - Conceptual design and mental model mapping
12 Nov 14 (Asynch)	**PROJECT 4: Design DUE** with individual team contribution evaluation form. Plan for Prototyping Iterative Design: Prototyping and Learning Conceptual Design in Context and Methodology User Research in Design Weekly Design Team Meeting	- Refine design and begin detailed design - Begin annotated wireframes - Read Chapters 14-16 (Parush) Work on defining functional chunks, configure conceptual model, outline navigation map
13	THANKSGIVING RECESS	NO CLASS

Nov 21		
14 Nov 28 (Asynch)	Implement Detailed Design Processes Navigation, Conceptual elements and Detailed Design Document Design Process Collect anecdotal feedback for pilot test with potential user(s) Finalize Prototype, Presentation	Read Chapters 17-19 (Parush) Finalize Prototype Design - Practice Presentation
15 Dec 5 **(F-to-F)**	**PROJECT 5: Prototype and Pilot Test DUE and PROJECT 6: Presentation DUE** with individual team contribution evaluation form **FINAL PRESENTATIONS**	- Finalize Prototype Design - Final Presentation
16 Dec 12 (Asynch)	**FINAL REFLECTION DUE**	**Congratulations!**

Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: http://cehd.gmu.edu/values/.

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see https://catalog.gmu.edu/policies/honor-code-system/).
- Students must follow the university policy for Responsible Use of Computing (see http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).

- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.

- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see http://ds.gmu.edu/).

- Students must follow the university policy stating that all sound emitting devices shall be silenced during class unless otherwise authorized by the instructor.

Campus Resources

Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or https://cehd.gmu.edu/api/tk20. Questions or concerns regarding use of Blackboard should be directed to http://coursessupport.gmu.edu/.

- For information on student support resources on campus, see https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

For additional information on the College of Education and Human Development, please visit our website https://cehd.gmu.edu/.

ASSESSMENT RUBRIC(S):

User Interaction Design and Development Project Rubric – Performance-Based Assessment (60%):

Criteria	IBSTPI Standard	Does not Meet Standards	Meets Standards	Exceeds Standards
Project 1: Topic and client selection and product concept statement (Total possible points – 25)				
Topic negotiated and agreed on with team and approved by instructor	1 Prof Foundations: Communicate effectively in visual, oral and written form.	No or limited evidence of negotiation and agreement process without approval 0 - 3.99 pts.	Evidence of negotiation and agreement process with approval 4 - 4.4 pts.	Clear evidence of outstanding teamwork, negotiation and agreement process with timely submission and approval 4.5 -5 pts.
Accessible client identified with contact name	1 Prof Foundations: Communicate effectively in visual, oral and written form.	Not evident or limited evidence of client contact or attempts but not confirmed by deadline	Evidence of established client contact but not confirmed by deadline 4 - 4.4 pts.	Client contact identified and established by deadline 4.5 -5 pts.

		0 - 3.99 pts		
Description of group/persons to serve as clients and/or participants in user experience design process	1 Prof Foundations: Communicate effectively in visual, oral and written form.	No evidence or limited description of clients and participants 0 - 3.99 pts	Description of clients and participants with some roles described 4 - 4.4 pts.	Concise, informative description of clients and participants, roles in user experience design process 4.5 -5 pts.
Proposal written in future tense, approximately 150 words, with name and description of organization/context , statement of what it will do, problem it will solve, if design or redesign, usefulness, users, etc.	1 Prof Foundations: Communicate effectively in visual, oral and written form.	No evidence or limited proposal submitted with concept statement 0 - 3.99 pts	Adequate proposal submitted with what system will do, problem will solve, design vision, emotional impact goals 4 - 4.4 pts.	Outstanding proposal submitted with clear and specific system concept statement with what system will do, problem will solve, design vision, emotional impact goals 4.5 -5 pts.
Topic connected to principles in instructional design (e.g. learning or training need established)	1 Prof Foundations: Communicate effectively in visual, oral and written form.	No connection or limited evidence or thought of ID process or principles 0 - 3.99 pts	Evidence or thought of ID process or principles intersected with user experience design process 4 - 4.4 pts.	High level of evidence or thought of ID process or principles intersected with user experience design process 4.5 -5 pts.
Project 1: Points				
Project 2: Contextual inquiry and analysis (Total possible points – 25)				
Prepared for field visits and interviews	4 Professional Foundation: Apply data collection and analysis skills in instructional design projects	No evidence or limited evidence of preparation 0 - 3.99 pts	Evidence of planning and preparation with posted documentation of data collection protocol 4 - 4.4 pts.	Outstanding, detailed evidence of planning and preparation with posted documentation of data collection protocol 4.5 -5 pts.
Field visits and interviews professionally carried out and methodology reported	6 Planning & Analysis: Conduct a needs assessment in order to recommend appropriate design solutions and strategies	No evidence or limited evidence of implementation of field visit and interviews 0 - 3.99 pts	Evidence of field visits and interviews through process and methodology reported 4 - 4.4 pts.	Outstanding and thorough documentation of field visit and interview process, methods and reporting 4.5 -5 pts.
Raw data collected, posted and organized	4 Professional Foundation: Apply data collection and analysis skills in instructional	No evidence or limited raw data not well-organized	Evidence of clear data collection methods and organization	Outstanding evidence of data collection, posting of process of collection and clearly organized

	design projects	0 - 3.99 pts.	4 - 4.4 pts.	for analysis 4.5 -5 pts
Analysis of work activity data through interpretation, consolidation and communication	4 Professional Foundation: Apply data collection and analysis skills in instructional design projects	No analysis or limited analysis of data with limited interpretation, organization and communication evident 0 - 3.99 pts.	Analysis evident with some interpretation, consolidation and communication 4 - 4.4 pts.	Outstanding, in-depth analysis with interpretation, consolidation and clear communication of synthesis of information for design purposes 4.5 -5 pts
Work activity affinity diagram with roles and/or workflow model or equivalent posted	4 Professional Foundation: Apply data collection and analysis skills in instructional design projects	No evidence or a limited diagram, workflow or equivalent posted 0 - 3.99 pts.	Beginning diagram, workflow or equivalent posted 4 - 4.4 pts.	Clear and thorough diagram, workflow or equivalent posted. Clear relationship to data collected and analyzed 4.5 -5 pts
Project 2: Points				
Project 3: Requirements and modeling (Total possible points – 10)				
Interaction design requirements extracted, scoped and written as statements	8 Planning & Analysis: Select & use analysis techniques for determining instructional content	No requirement or limited requirements with little evidence of scoping and statements 0 - 3.99 pts	Evidence of scoping and requirement statements established 4 - 4.4 pts.	Excellent evidence of process of scoping and well-written requirement statements and documentation of process 4.5 -5 pts
Draft and progressive refinement of design-informing models	8 Planning & Analysis: Select & use analysis techniques for determining instructional content	No evidence or little evidence of modeling implemented 0 - 3.99 pts	Evidence of design-informing models implemented connected to contextual data 4 - 4.4 pts.	Excellent documentation of design informing models progression and evolution directly connected to contextual data 4.5 -5 pts
Project 3: Points				
Project 4: Design (Total possible points – 20)				
Creation of personas that demonstrate sensitivity to varying audience and contextual needs for interface/learning design	7 Planning & Analysis: Identify and describe target population and environmental characteristics	No personas or limited personas drafted that are vague and not connected to user goals 0 - 3.99 pts	Beginning level personas established and connected to contextual data	Excellent personas identified, written and aligned with user goals, roles or class, etc.

			4 - 4.4 pts.	4.5 -5 pts
Progression of ideation documented and demonstrate iteration	12 Design instructional intervention	No evidence or little ideation documented and no evidence of iteration of the design idea 0 - 3.99 pts	Adequate level of ideation, documented with evidence of some iteration 4 - 4.4 pts.	Outstanding level of ideation documented with progression of iterations clearly demonstrated 4.5 -5 pts
Sketching demonstrated as visual exploration of ideas	12 Design instructional intervention	None or little evidence of sketching of design ideas for conversation and creativity 0 - 3.99 pts	Evidence of sketching of design ideas facilitating conversation and creative choices 4 - 4.4 pts.	Outstanding evidence of sketching of multiple design ideas, enhancing conversation and demonstrating creativity of group 4.5 -5 pts
Annotated storyboards, Wireframes, and/or scenarios drafted to represent screens and navigation in detailed design	12 Design instructional intervention	None or little evidence of detailed design documentation 0 - 3.99 pts	Evidence of annotated design documentation 4 - 4.4 pts.	Outstanding evidence of detailed design documentation with annotated storyboards, wireframes and detailed navigation represented and described 4.5 -5 pts
Project 4: Total points				
Project 5: Prototype and Pilot Test (Total possible points – 10)				
Determine and create highest level of fidelity of prototype and interactivity possible to best demonstrate design to users	12 Design instructional intervention	No evidence or limited prototype with limited representation of functionality 0 - 3.99 pts	Adequate prototype with representation of functionality for testing by users 4 - 4.4 pts	Excellent prototype with high level of functionality for testing with users 4.5 -5 pts
Pilot test design with users and report results	9 Planning & Analysis: Analyze the characteristics of existing and emerging technologies and their potential use	No pilot test or limited pilot testing with a single user 0 - 3.99 pts	Pilot testing completed with more than one user and reported results 4 - 4.4 pts	Thoughtful pilot testing with more than one user and thorough results reported with excellent insights for iterative design or redesign 4.5 -5 pts
Project 5: Points				

Project 6: Revised Prototype and Project Presentation (Total possible points – 10)				
Professional presentation	1 Professional Foundations: Communicate effectively in written and oral form	No evidence or little evidence of preparation or organization in delivery of presentation 0 - 3.99 pts	Evidence of preparation, organization and practiced delivery of presentation 4 - 4.4 pts	Excellent presentation evidenced by organized, practiced, professional delivery of presentation 9-10 pts.
Timely, informative presentation detailing design process and progression of prototype	1 Professional Foundations: Communicate effectively in written and oral form	Presentation does not adhere to established timeframe, and/or does not state clearly design process and progression of prototype. 0 - 3.99 pts	Presentation mostly adheres to established timeframe, states design process and progression of prototype 4 - 4.4 pts	Informative presentation adhering to established timeframe; well-articulates design process and progression of prototype design 4.5 -5 pts
Project 6: Points				
Total Points Across Projects 1-6 (Total				