ISM 390 Special Topics: **Design of Learning Technologies**   **Spring 2014**

Instructor
Denise C. Nacu, Ph.D.
Office: CDM 473
Email: dnacu@cdm.depaul.edu
Office hours: Wednesdays 10:00-11:30 AM and by appointment

Course Information
ISM 390 Section 601   Class number: 36827
Class times: Mon & Wed 11:50 AM - 1:20 PM
Room: CDM 801   Campus: Loop
Last day to drop the course with no penalty: April 11, 2014. If dropped on or after April 12, 2014, grade of "W" will be assigned.

Course Website
We will use Design to Learn (D2L) to manage course materials and communications: https://d2l.depaul.edu/

Course Summary
This advanced course explores learning theories, principles, pedagogical approaches, and their application in the design of learning technologies. Students will examine a variety of learning-oriented software to understand learning goals, tasks, and learning supports. Working individually or in groups, students will gain practical experience designing and prototyping a learning technology application.

Prerequisites
IM 220 or ISM 220.

Learning Objectives
1. Students will understand **theories of learning** and their implications for the design of learning technologies.
2. Students will be able to **critically evaluate** various types of learning technologies by analyzing **learning goals, tasks, and learning supports.**
3. Students will gain **practical experience** in conceptualizing, designing, developing, documenting, and researching software intended to support learning.

Required Texts
No required texts. Readings will be provided.

Software & Computer Labs
This course assumes knowledge of prototyping (ex., Axure RP) and/or software development experience. The class is scheduled in a computer lab to help provide access to needed software.

Class Format
Class meetings will involve group discussions, hands-on activities, design work, critique, and presentations of projects. Students should expect to spend **5 to 10 hours per week** on reading, research, design, development, and writing activities outside of class time.

Evaluation & Grading
Coursework includes the following components.

Grade Proportion	Course Requirement	Due
20%	Class Participation & Quizzes	Ongoing
18%	Learning Technology Exploration	To be scheduled
10%	D1 Project Proposal	April 30, 2014
10%	D2 Design Sketch/Prototype	May 12, 2014
10%	D3 Detailed Project Update	May 19, 2014
20%	D4 Final Project/Presentation	June 2, 2014
12%	Portfolio Piece	June 9, 2014
100%	Total	

Class Participation & Quizzes. This portion of the grade is based on being an active participant in discussions, activities, and group work. Grade is based on compliance with Attendance, Class Participation, and Attitude expectations described on page 4. Occasionally, "discussion warm-up" quizzes will be assigned (in D2L) before class meetings.

Learning Technology Exploration (Group). In a small group, you will examine examples of learning technology in detail. You will present your study and engage the class in a discussion and/or activity that will help us learn from the readings and gain new understandings about learning, design, and technology.

Project Deliverables (Group or individual). Students will work individually or in small groups to conceptualize and design a piece of learning technology. Four deliverables are required:

> D1 Project Proposal
> D2 Design Sketch/Prototype
> D3 Detailed Project Update
> D4 Final Project/Presentation

Portfolio Piece (Individual). Students will document their project work in a form suitable for a professional portfolio.

Peer Help Extra Credit. For going above and beyond helping other students on particular assignments, 1 to 10% of points may be awarded at discretion of instructor. The student who was helped must email the instructor and summarize the help that was provided.

Grading Scale
Letter grades are based on the percent of total points earned.

A	93.00%	Excellent
A-	90.00%	Very Good
B+	88.00%	
B	83.00%	Good
B-	80.00%	
C+	78.00%	
C	73.00%	Satisfactory
C-	70.00%	
D+	68.00%	
D	60.00%	
F	0.00%	

Class Schedule

Scheduled required readings must be done before the class meeting. Schedule is subject to change. Additional readings may be added as needed.

Class	Before Class Required Reading	In Class Topics and Activities
Module 1: Introduction		
M Mar 31 Class 1		• **Introduction**, course overview, expectations and policies, topics and projects • Suggestions from *How to Read a Book* (Adler & Van Doren, 1972)
Module 2: Examining Learning Theory, Pedagogy, and Design in Learning Technologies		
W April 2 Class 2	*Start reading for upcoming weeks.*	• **Guest speaker**: Kelly Schroer, *User Experience Architect* at Encyclopaedia Britannica • Explore: http://www.britannica.com/
M April 7 Class 3	• Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). Washington, D.C.: National Academy Press. Chapter 1 (focus on pages 1-13) • Soloway, Guzdial & Hay, 1994, *Learner-Centered Design.* • **Due** **Discussion Warm-Up Quiz (due by 10:00am)**	• **Behaviorist and constructivist learning theory** • Learning-centered vs. user-centered design • Explore (tentative): Cognitive Tutor, vobabulary.com, Stack the States, Kids Planet Discovery, Codeacademy
W April 9 Class 4	• Reeves, T. (1997). *Evaluating What Really Matters in Computer-Based Education* • Collins, A. (1995). *Design Issues for Learning Environments.* • *NMC Horizon Report > 2014 Higher Education Preview* (At least read the 7-page preview)	• **Design issues for learning technologies** • **Due** **Learning Technology Exploration 1:** Coursera, Udacity, edX
M April 14 Class 5	• *How People Learn,* Chapter 2. How Experts Differ from Novices. • *How People Learn,* Chapter 3. Learning and Transfer. • **Due** **Discussion Warm-Up Quiz (due by 10:00am)**	• **Expertise** • Key terms: understanding and problem solving, metacognition, transfer • **Due** **Learning Technology Exploration 2:** DIY.org, Khan Academy
W April 16 Class 6	• Gee, J. P. (2004). Learning by design: Games as learning machines. *Interactive Educational Multimedia*, 8(April 2004), 15-23. • Malone, T. W., & Lepper, M. R. (1987). Making learning fun: A taxonomy of intrinsic motivations for learning.	• **Motivation and learning** • Explanation of D1 • **Due** Learning Technology Exploration 3: TBD
M April 21 Class 7	• Brown & Adler (2008). *Minds on Fire: Open Education, the Long Tail, and Learning 2.0.* • *Kids Online: A new research agenda for understanding social networking forums* (2012) • **Due** **Discussion Warm-Up Quiz (due by 10:00am)**	• **Social learning networks** • **Due** **Learning Technology Exploration 4**: Chicago Summer of Learning, DIY.org, Whyville
W April 23 Class 8	• Resnick, M. (2007). *All I really need to know (about creative thinking) I learned (by studying how children learn) in kindergarten.*	• **Constructionist learning theory** • **Due** **Learning Technology Exploration 5:** Scratch
Module 3: Projects: Conceptualization, Design & Prototyping		
M April 28 Class 9		• Share and discuss initial project ideas • Discuss ideas for evaluation • Feedback and help on D1 in progress

Class	Before Class Required Reading	In Class Topics and Activities
W April 30 Class 10		• `Due` **D1 Project Proposal** • Sharing and feedback on D1
M May 5 Class 11		• **Project work:** Sketching, storyboarding, prototyping • Explanation of D2
W May 7 Class 12		• **Project check-ins** • Project work: Refining activities, tasks, and supports
M May 12 Class 13		• `Due` **D2 Design Sketch/Prototype** • Sharing and feedback on D2 • Explanation of D3
W May 14 Class 14		• **Guest speaker TBD**
M May 19 Class 15		• `Due` **D3 Detailed Project Update** • Sharing and feedback on D3
W May 21 Class 16		• Project work • Explanation of D4
M May 26	No class: Memorial Day	
W May 28 Class 17		• Project work in class
M June 2 Class 18		• `Due` **D4 Final Project Presentations**
W June 4 Class 19		• `Due` **D4 Final Project Presentations, Continued** • Wrap-Up
M June 9	• `Due` **D4 Final Project** • `Due` **Portfolio Piece**	

Acknowledgements
The design of this course draws from syllabi of other instructors teaching similar subjects: Amy Bruckman, Barry Fishman, Peter Hastings, Michael Horn, Nichole Pinkard, Chris Quintana, and Brian Shrank. I am grateful for their work.

Assigned Readings
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). Washington, D.C.: National Academy Press. Available online: http://www.nap.edu/catalog.php?record_id=9853
- Brown, J.S. & Adler, R.P. (2008). Minds on Fire: Open Education, the Long Tail, and Learning 2.0. EDUCAUSE Review, 43(1), 16-20.
- Collins, A. (1995). Design Issues for Learning Environments. In S. Vosniadou, E. de Corte & H. Mandle (Eds.), International perspectives on the psychological foundations of technology-based learning environments (pp. 347-361). Hillsdale, NJ: Erlbaum.
- Gee, J. P. (2004). Learning by design: Games as learning machines. Interactive Educational Multimedia, 8(April 2004), 15-23.
- Johnson, L., Adams Becker, S., Estrada, V., Freeman, A.(2014). NMC Horizon Report: 2014 Higher Education Edition. Austin, Texas: The New Media Consortium. http://www.nmc.org/publications/2014-horizon-report-higher-ed
- Kids Online: A new research agenda for understanding social networking forums by Sara Grimes and Deborah Fields (2012). http://www.joanganzcooneycenter.org/publication/kids-online-a-new-research-agenda-for-understanding-social-networking-forums/
- Malone, T. W., & Lepper, M. R. (1987). Making learning fun: A taxonomy of intrinsic motivations for learning. In R. E. Snow & M. J. Farr (Eds.), *Aptitude, learning, and instruction: Cognitive and affective process analysis* (Vol. 3, pp. 223-253). Hillsdale, NJ: Erlbaum.
- Reeves, T. *Evaluating What Really Matters in Computer-Based Education.*
- Soloway, E., Guzdial, M., & Hay, K. E. (1994). Learner-centered design: The challenge for HCI in the 21st century. Interactions, 1, 36-48.
- Reeves, T. (1997). Evaluating What Really Matters in Computer-Based Education. http://www.eduworks.com/Documents/Workshops/EdMedia1998/docs/reeves.html

Supplementary Readings (Additional supplemental readings may be provided)
- Amarin & Ghishan, 2013, Learning With Technology from a Constructivist Point of View
- Daniel C. Edelson and Diana M. Joseph. 2004. The interest-driven learning design framework: motivating learning through usefulness. In Proceedings of the 6th international conference on Learning sciences (ICLS '04). International Society of the Learning Sciences 166-173.
- Pioneering Literacy in the Digital Wild West: Empowering Parents and Educators by Lisa Guernsey, Michael H. Levine, Cynthia Chiong & Maggie Stevens. (2012). http://www.joanganzcooneycenter.org/publication/pioneering-literacy/

Policies & Expectations

Attendance
Students are expected to attend each class and to remain for the duration. Attendance will be taken.

- **Attend every class.**
- Absences for any reason **should not exceed two** during the quarter. **A third absence will reduce your final grade by one letter grade.**
- **Arrive on time to every class**. Being present and arriving on time to every class is my expectation for everyone. Important information is communicated at the very beginning of class. If there is a reason why you cannot consistently arrive on time to class, please let me know.
- **Communicate with me** if you must miss class arrive late for any reason.
- Tardiness that exceeds 30 minutes is counted as an absence.
- Students are individually responsible for material they may have missed due to absence or tardiness.
- Please notify me in advance if there are any special needs.

Class Behavior
- Food and drink during class is ok
- *Surfing Facebook, Pinterest, and checking email, etc. during class when your attention is expected is disrespectful and unprofessional.* I am asking for your cooperation and attention during class time.
- Be a respectful participant by keeping phones in silent mode and do not text in class. If you have a need to be available by phone (sick relative, etc.), please let me know.
- Be engaged in class discussions and workshop activities:
    - Participate with enthusiasm
    - Show genuine effort to cooperate with others
    - Show leadership and take initiative in group efforts
    - Frequently and eagerly offer your thoughts, perspectives, and responses to instructor/classmates
    - Make contributions that reflect excellent preparation (i.e., complete required reading)
- Practice professionalism
    - Communicate (face-to-face, emails, etc.) with the professor and fellow students in a professional and appropriate manner
    - Use body language (ex., eyes, posture) that shows active listening during instructor/student presentations
    - Be careful not to distract others (socializing, sleeping, leaving early or during class, reading unrelated material, doing homework for another class or wearing inappropriate attire);
    - Be respectful towards others

Attitude
A professional and academic attitude is expected throughout this course. Measurable examples of non-academic or unprofessional attitude include but are not limited to: talking to others when the instructor is speaking, mocking another's opinion, cell phones ringing, emailing, texting or using the internet whether on a phone or computer. If any issues arise a student may be asked to leave the classroom. The professor will work with the Dean of Students Office to navigate such student issues.

Late Assignments
Late assignments will be accepted only if you (1) contact me at least two hours before the due date with an explanation, and (2) turn in the assignment within three days of the due date. Each day the assignment is late after three days will decrease the possible point value by 10%. Late assignments may not include comments in addition to the grade. **If you do not communicate with me at all within 24 hours of the due date, I will not accept the assignment and no credit for the assignment will be given.** My policy is intended to encourage communication with me regarding any difficulty handing the assignment in on time.

Civil Discourse
DePaul University is a community that thrives on open discourse that challenges students, both intellectually and personally, to be Socially Responsible Leaders. It is the expectation that all dialogue in this course is civil and respectful of the dignity of each student. Any instances of disrespect or hostility can jeopardize a student's ability to be successful in the course. The professor will partner with the Dean of Students Office to assist in managing such issues.

Incomplete Grades
An incomplete grade is a special, temporary grade that may be assigned by an instructor when unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. CDM policy requires the student to initiate the request for incomplete grade before the end of the term in which the course is taken. Prior to submitting the incomplete request, the student must discuss the circumstances with the instructor. Students may initiate the incomplete request process in MyCDM.
- All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval.
- If approved, students are required to complete all remaining course requirement independently in consultation with the instructor by the deadline indicated on the incomplete request form.
- By default, an incomplete grade will automatically change to a grade of F after two quarters have elapsed (excluding summer) unless another grade is recorded by the instructor.
- An incomplete grade does NOT grant the student permission to attend the same course in a future quarter.

Withdrawal
Students who withdraw from the course do so by using the Campus Connection system. Withdrawals processed via this system are effective the day on which they are made. Simply ceasing to attend, or notifying the instructor, or nonpayment of tuition, does not constitute an official withdrawal from class and will result in academic as well as financial penalty.

Coursework Grade Review Requests

Every effort is made to grade in a fair and consistent manner. Should a disagreement arise about a coursework grade, the student may submit a grade review request in writing to the instructor. The request must be submitted within 48 hours after the assignment grade has been posted. The request must include the student's argument for a different grade evaluation, based on verifiable evidence presented by the student. The instructor handles grade review requests and responds to the student with a review decision as soon as possible.

Retroactive Withdrawal

This policy exists to assist students for whom extenuating circumstances prevented them from meeting the withdrawal deadline. During their college career students may be allowed one medical/personal administrative withdrawal and one college office administrative withdrawal, each for one or more courses in a single term. Repeated requests will not be considered. Submitting an appeal for retroactive withdrawal does not guarantee approval.

College office appeals for CDM students must be submitted online via MyCDM. The deadlines for submitting appeals are as follows:
- Autumn Quarter: Last day of the last final exam of the subsequent winter quarter
- Winter Quarter: Last day of the last final exam of the subsequent spring quarter
- Spring Quarter: Last day of the last final exam of the subsequent autumn quarter
- Summer Terms: Last day of the last final exam of the subsequent autumn quarter

Academic Integrity Policy & Plagiarism

This course will be subject to the academic integrity policy passed by faculty. More information can be found at http://academicintegrity.depaul.edu/.

The university and school policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor. **Assignments submitted to D2L will be electronically checked for plagiarism (using specialized software built in to D2L).**

Resources for Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

> Student Center, LPC, Suite #370
> Phone number: (773)325.1677
> Fax: (773)325.3720
> TTY: (773)325.7296

Online Instructor Evaluation

Instructor and course evaluations provide valuable feedback that can improve teaching and learning. The greater the level of participation, the more useful the results. As students, you are in the unique position to view the instructor over time. Your comments about what works and what doesn't can help faculty build on the elements of the course that are strong and improve those that are weak. Isolated comments from students and instructors' peers may also be helpful, but evaluation results based on high response rates may be statistically reliable (believable). As you experience this course and material, think about how your learning is impacted. Your honest opinions about your experience in and commitment to the course and your learning may help improve some components of the course for the next group of students. Positive comments also show the department chairs and college deans the commitment of instructors to the university and teaching evaluation results are one component used in annual performance reviews (including salary raises and promotion/tenure). The evaluation of the instructor and course provides you an opportunity to make your voice heard on an important issue – the quality of teaching at DePaul. Don't miss this opportunity to provide feedback!

Visit the Writing Center

Consider visiting the Writing Center to discuss your written assignments for this course. Writing Center Tutors are specially trained undergraduate and graduate students who can help you at any stage of your writing project. They can help you focus and develop your ideas, review your drafts, and polish your writing, as well as answer questions about grammar, mechanics, style, and citation. You may schedule appointments on an as-needed or weekly basis. In addition to Face-to-Face appointments, the Writing Center also provides Written Feedback by Email and Online Appointments. Be sure to schedule your appointment with enough time to think about and incorporate the feedback you'll receive. Bring/upload your assignment handout and/or any other relevant materials to your appointment.

How do I schedule an appointment? To schedule a Face-to-Face, Written Feedback by Email, or Online Appointment, visit www.depaul.edu/writing. You can also call one of our offices: (312) 362-6726 (Loop Office, 1600 Lewis Center) or (773) 325-4272 (LPC Office, 250 McGaw Hall). When possible, the Writing Center accepts walk-in requests, but it's always a good idea to schedule your appointment ahead of time. You may schedule tutorials on an as-needed basis or as weekly standing appointments up to 3 hours per week. All Writing Center services are free to the DePaul community.

Assignment Details

Learning Technology Exploration (Group Assignment)

In a small group, you will examine examples of learning technology in detail. By researching and interacting with these examples, you will investigate how learning is supported in the design (or not) and try to connect the ideas raised in the readings to examples of learning technologies. *Your group may choose to arrange a meeting with me for any help or feedback on the assignment at least five (5) days in advance of the scheduled presentation date.*

Process

1. **Read the assigned readings** for the day you are scheduled for this assignment. Consider any optional or supplemental readings provided by the instructor or from your own research.
2. **Note the suggested examples** (listed in the class schedule) and **identify one or two of examples you find** that you think can help explore ideas raised in the readings. Internet searching should be sufficient for this.
3. Take some time to explore and analyze each example.
4. For each software example you choose, investigate the following questions:
   - What are the learning goals (implicit or explicit)?
   - What is the assumptions about the context of use?
   - What are the key tasks or activities learners can accomplish?
   - How do you think the software design is intended to support learning?
   - How well do you think learning is supported or not?
6. Your group should prepare two parts for your scheduled Learning Technology Exploration. Together, your group should plan to use about 45 minutes of class time:
   - **Presentation of examples**. Share your examples with the class, highlighting your analysis and critique using the questions above. It's highly preferred that you share examples that allow for hands-on interaction.
   - **Discussion/Activity.** Design an activity to get the class engaged in the ideas. This is an opportunity for you to create a design for learning. Creative and interactive approaches are highly encouraged!
7. On your assigned day, your group will lead the Learning Technology Exploration.

Grading

Everyone in the group will receive the same grade for this assignment. I expect each student to contribute equivalent amount of effort on this assignment. The grade is based on the following grading criteria:

- All requirements as described above were delivered
- Analysis of software examples adequately addressed the questions listed above
- Quality of preparation and presentation (should be well planned and organized, and demonstrate an understanding of the readings)
- How well the selected examples (and surrounding discussion/activities) engaged the class with issues of learning, design, and technology

This assignment comprises **18%** of the final grade and is worth 100 points. Depending on how the assignment is assessed as: above expectations, meets expectation, or below expectations, points will be awarded as follows:

- 100 (A) Exceeds expectations on all criteria - *impressive!*
- 90 (A-) Met all expectations on all criteria - *good work, you did what was required.*
- 83 (B) Only two criteria met or exceeded expectations - *you didn't fully meet the requirements*
- 80 (B-) Only one criterion met or exceeded expectations - *you didn't meet the requirements*
- 73 (C) Below expectations on all criteria - *your work is far below expectations*

Schedule

April 9   Students assigned: _____ _____ _____

April 14 Students assigned: _____ _____

April 16 Students assigned: _____ _____ _____

April 21 Students assigned: _____ _____

April 23 Students assigned: _____ _____ _____

Design Project

Overview

The purpose of the project is to engage you in the early phases of a learning design including doing background research, user research, ideation, sketching, and storyboarding. You will generate learning goals as well as a theoretically grounded rationale for your design.

Type of learning technologies. Depending on your interests and skills, the type of product you design might vary greatly across the class. Designs might include a proposal for an web application for an online learning community, an educational mobile app, or a software tool for teachers. As inspiration for your project, you are encouraged to draw from your own interests and passions and/or from any real learning context with which you have a connection (ex., you may know an elementary school teacher who you can talk to for project ideas). You are not required to identify a "real client" for this work; however, any opportunities for conducting evaluation and getting feedback from authentic sources is a plus.

Project organization. Working in small groups is strongly encouraged; however, you may work individually if you wish.

Expectations for the final project. Your final deliverable in this class should be a well-detailed, professionally crafted prototype that serves as a demonstration for what your proposed learning technology system would do and how it would achieve certain learning goals. Depending on your skills and interests, your design can be rendered in various forms. For example, you may use the Axure prototyping software, a content management system, HTML/CSS, FileMaker Pro, or static visual representations (i.e., annotated mockups, wireframes and storyboards). Importantly, your final project must include:

- **Goals**: A description of learning goals
- **Features**: A detailed description of features and key learner activities and tasks
- **Rationale**: A rationale for the system design that connects to theories of learning and motivation
- **Design**: A professionally rendered representation that demonstrates your proposed system in detail
- **Evaluation and Reflection**: A narrative that explains what form(s) of evaluation you used to refine and develop your design

The project is structured in four parts, which are described below.

D1 Project Proposal

Create a concise (but sufficiently detailed) written document that describes:
- **Target audience:** Characteristics of your target audience
- **Content area:** The content area of your software
- **Learning goals:** A small number of concise learning goals
- **Scenario of use:** Describe the needs that your design fills in the form of a scenario or storyboard
- **Learning theory:** Explain the theoretical basis for your design (ex., what theory of learning underlies your proposed approach? How does your proposed design use pedagogy that is aligned with learning theory?)
- **Research and Evaluation:** A proposal for how you will test and refine your design. For example, you may choose to do interviews (of educators, students, specialists) to gain insight into the conceptualization of your system. Or, you may choose to set up usability tests of a paper or interactive prototype in the latter stages of design. At minimum, you need to plan at least one form of evaluation that will help to strengthen your design. Depending on the nature of your design, background research might include reviewing academic literature, interviewing teachers, students, or other users, consulting curriculum standards, performing a competitive analysis of existing solutions, or visiting a museum.

Deadline: You will share your proposal with the class on **April 30, 2014,** and submit your written document (PDF preferred) to D2L.

Grading criteria:
- Includes all elements listed above
- Quality of writing
- Quality of presentation
- Coherence of design elements and design rationale
- Demonstrates understanding and connection to course readings
- Preparation for sharing and presentation with class

This assignment comprises **10%** of the final grade and is worth 100 points. Depending on how the assignment is assessed as: above expectations, meets expectation, or below expectations, points will be awarded as follows:
- 100 (A) Exceeds expectations on all criteria - *impressive!*
- 90 (A-) Met all expectations on all criteria - *good work, you did what was required.*
- 83 (B) Only two or three criteria met or exceeded expectations - *you didn't fully meet the requirements*
- 80 (B-) Only one or two criteria met or exceeded expectations - *you didn't meet the requirements*
- 73 (C) Below expectations on all criteria - *your work is far below expectations*

D2 Design Sketch/Prototype

Create an initial design sketch or prototype. Your prototype may include interface sketches, storyboards, wireframes, paper prototypes, etc. Your main goal is to communicate the main components of your design and what the learning activities and supports would be like.

The purpose of this deliverable is to make ideas described in your proposal concrete, specific, and shareable so that they can be critiqued and further refined. This should be a thoughtfully created deliverable that builds from your proposal by "fleshing out" key details of your project. At minimum, this deliverable should describe the overall architecture of your proposed design and two or three key learning activities or tasks.

Deadline: You will share your proposal to the class on **May 12, 2014,** and submit your written document (PDF preferred) to D2L.

Grading criteria:
- Describes the overall architecture of the system with enough detail for the reader to get a reasonable understanding of it
- Describes two or three key leaning activities (clearly shows what learners would do and how learning is supported)
- Quality of descriptions and annotation (clearly written with adequate detail)
- Professional quality of presentation
- Quality of design (grounded in learning theory, follows usability principles, connects to ideas presented in the design proposal)
- Preparation for sharing and presentation with class

This assignment comprises **10%** of the final grade and is worth 100 points. Depending on how the assignment is assessed as: above expectations, meets expectation, or below expectations, points will be awarded as follows:
- 100 (A) Exceeds expectations on all criteria - *impressive!*
- 90 (A-) Met all expectations on all criteria - *good work, you did what was required.*
- 83 (B) Only two or three criteria met or exceeded expectations - *you didn't fully meet the requirements*
- 80 (B-) Only one or two criteria met or exceeded expectations - *you didn't meet the requirements*
- 73 (C) Below expectations on all criteria - *your work is far below expectations*

D3 Detailed Project Update

Provide an update on your design that includes results of your evaluation. Describe what method(s) of evaluation you used and discuss how you have or will incorporate the results into your project. Submit an updated design proposal that is a more detailed version of the design proposal you created in D1. If you have been iterating and refining your design, you will most likely have a more detailed conceptualization of:
- The content area addressed in the software
- Characteristics of the target learner audience
- How the software will support learning
- Description of features and activities, along with system representations such as user interface designs and storyboard.

Deadline: You will share your proposal to the class on **May 19, 2014,** and submit your written document (PDF preferred) to D2L.

Grading criteria:
- Includes all elements as described above
- Quality of description of evaluation method(s) and how they were applied
- Quality of writing, descriptions, and annotations
- Professional quality of presentation
- Quality of design (grounded in learning theory, uses sound pedagogy, follows usability principles)
- Preparation for sharing and presentation with class
- Evidence of iteration and refinement (Show that you made good progress from D2)

This assignment comprises **10%** of the final grade and is worth 100 points. Depending on how the assignment is assessed as: above expectations, meets expectation, or below expectations, points will be awarded as follows:
- 100 (A) Exceeds expectations on all criteria - *impressive!*
- 90 (A-) Met all expectations on all criteria - *good work, you did what was required.*
- 83 (B) Only two or three criteria met or exceeded expectations - *you didn't fully meet the requirements*
- 80 (B-) Only one or two criteria met or exceeded expectations - *you didn't meet the requirements*
- 73 (C) Below expectations on all criteria - *your work is far below expectations*

D4 Final Project/Presentation

For the final project, you will present a **prototype** of your system that illustrates how the design is intended to support learning. It should be well detailed and presented with *high-fidelity* to the final product. Attention should be given to the <u>design of the task(s)</u>, <u>interaction design</u>, <u>graphic design</u>, and <u>user interface design</u>. In your final project, you will describe in detail the **learning goals**, driving **learning theories**, a description of intended **users**, a description of **features** and how your design provides **learning support**. Ideally, this final deliverable has enough detail and a strong enough conceptualization that would warrant and support further development. Finally, describe the strengths and any limitations or shortcomings of your design.

Grading criteria:
- Includes all elements as described above
- Quality of writing and coherence of deliverable
- Professional quality of presentation
- Demonstrated understanding of learning, design, and technology issues
- Quality of design (grounded in learning theory, uses sound pedagogy, follows usability principles, attention to interaction design, graphic design, user interface design)
- Preparation for sharing and presentation with class
- Evidence of iteration and refinement (Show that you made good progress from D3)

Extra Credit: Earn up to 10 extra points by creating a video to demonstrate your design. Maximum: 3 minutes. Must be shown during presentations to get credit**.**

Deadline: You will share your project with the class on **June 2 or 4, 2014.** Submit your final project (PDF preferred) to D2L by **June 9, 2014.**

This assignment comprises **20%** of the final grade and is worth 100 points. Depending on how the assignment is assessed as: above expectations, meets expectation, or below expectations, points will be awarded as follows:
- 100 (A) Exceeds expectations on all criteria - *impressive!*
- 90 (A-) Met all expectations on all criteria - *good work, you did what was required.*
- 83 (B) Only two or three criteria met or exceeded expectations - *you didn't fully meet the requirements*
- 80 (B-) Only one or two criteria met or exceeded expectations - *you didn't meet the requirements*
- 73 (C) Below expectations on all criteria - *your work is far below expectations*

Portfolio Piece

Create a piece that would be suitable for your **professional online portfolio**. If you already have an online portfolio, you may choose to create one page of your portfolio to highlight this work. Or, you may create a standalone piece that would (hopefully) go into your portfolio in the future. This does not to be wordy or long; however, if should be **visual** and should contain **well-edited writing** with *zero* spelling, grammatical, or typographic errors. Make sure you are clear about your role and the roles played by others, if applicable.

Requirements:
- **Introduction.** Include a short statement about you, your background/skills, and your purpose in presenting this portfolio piece.
- **Format.** The portfolio may be presented in a PDF or as a website (provide the URL).
- **Project narrative.** Select artifacts from your project and tell a story about the process you (and your team, if applicable) undertook. In describing your process, highlight the skills you applied, and tools you used. You may also discuss key questions or challenges you tackled. Be sure to organize this narrative so that the reader can easily understand your work. For example, you might include headings such as: Project Goals, Early Designs, User Research, Final Design.
- **Reflection**. Write a concise statement that summarizes any lessons learned through the project and what you have learned about the design of learning technologies.

Grading criteria:
- Includes all elements as described above
- Quality of project narrative
- Quality of writing and presentation
- Visual design and readability
- Offers lessons learned or insights about the design of learning technologies

Deadline: Submit to D2L dropbox and D2L discussion by **June 9, 2014**.

This assignment comprises **12%** of the final grade and is worth 100 points. Depending on how the assignment is assessed as: above expectations, meets expectation, or below expectations, points will be awarded as follows:
- 100 (A) Exceeds expectations on all criteria - *impressive!*
- 90 (A-) Met all expectations on all criteria - *good work, you did what was required.*
- 83 (B) Only two or three criteria met or exceeded expectations - *you didn't fully meet the requirements*
- 80 (B-) Only one or two criteria met or exceeded expectations - *you didn't meet the requirements*
- 73 (C) Below expectations on all criteria - *your work is far below expectations*