Advanced Instructional Design
EDIT 730 – 001 - 3 credits (*pre-requisite EDIT 705*)
Syllabus
Fall 2017

General Information

Time: Tuesdays, 4:30 PM – 7:10 PM
Location: Thompson Hall L003
Instructor: Dr. Susan Dass
Phone: use email

Division of Learning Technologies
IDT Program: http://learntech.gmu.edu/idt/
Office: Thompson Hall (office hours by appointment)
Email: sdass@gmu.edu

Course Description

Catalog Description: Provides students with the knowledge and skills for designing highly contextualized and engaging problem-solving learning environments using a grounded, theory-based design approach. Emphasizes the design of technology supported learning environments using a variety of pedagogical models.

Expanded Description: Provides students with the knowledge and skills for designing highly contextualized and engaging problem-solving learning environments (PSLEs) based on the principles of constructivism, situated cognition, and connectivism. Readings expose students to a range of epistemological and theoretical perspectives as evidenced by instructional design literature and applications. The focus is on **grounded or theory-based design**, which differs from the systematic process of instructional design as discussed in EDIT 705 (e.g., ADDIE). However, the principles of systematic instructional design are fundamental to understanding and implementing this design approach. The course also emphasizes the design of online or technology supported learning environments (TSLEs) using a variety of pedagogical models.

Pre-requisites: EDIT 705; students are expected to be proficient in the principles and processes of instructional design (e.g., performing task and audience analysis, writing learning outcomes or instructional objectives, and aligning learning outcomes with taxonomies for identifying learning domains and assessment).

Course Delivery Method: The course will be conducted through a mixture of lecture, in-class discussions and activities, online discussions, and individual and collaborative activities including a final design project.

Learner Outcomes or Objectives

1. Develop an understanding of epistemological approaches to learning and cognition such **as objectivism, behaviorism, cognitivism**, **constructivism, situated cognition, and connectivism.**
2. Develop an understanding of **grounded design** or **theory-based design**.
3. Develop an **applied** understanding of **constructivism** and its implications for designing problem-solving learning environments (PSLEs).
4. Examine a variety of constructivist-based **pedagogical models** and their implications for the design of PSLEs and TSLEs.
5. Appreciate the importance of the linkage between theories of learning and instructional design practice.

Professional Standards

The learning outcomes for this course align with the 2012 International Board of Standards for Training, Performance and Instruction (IBSTPI) competencies of *Professional Foundations* and *Design and Development* as follows (see http://www.ibstpi.org/instructional-design-competencies/):

- *Professional Foundations (1):* Communicate effectively in written & oral form
- *Professional Foundations (2):* Apply research and theory to the discipline of instructional design
- *Planning & Analysis (9):* Analyze the characteristics of existing & emerging technologies & their potential use
- *Design & Development (10):* Use an instructional design & development process appropriate for a given product
- *Design & Development (11):* Organize instructional programs/products to be designed, developed, and evaluated
- Use an instructional design and development process appropriate for a given project
- *Design & Development (12):* Design instructional interventions

Required Texts

Jonassen, D.H. (2011). *Learning to solve problems: A handbook for designing problem-solving learning environments*. New York, N.Y.: Routledge, Taylor & Francis.

Additional readings are provided on Blackboard or as handouts in class. The Blackboard course website will have a variety of **instructional resources organized according to the learning modules in the timeline below and should be explored with each module**. To access Blackboard, go to mymason.gmu.edu

Learning Activities, Performance Based Assessments, and Grading Policy

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, TK20, etc.)

CLE (Constructivist Learning Environment) Criteria and Application   25% of grade

In groups, students will (a) identify theoretical principles and instructional characteristics of Constructivist Learning Environments (CLEs) based on the readings and additional reliable resources, (b) contrast these to the theoretical principles and instructional characteristics of Objectivist or Behaviorist Learning Environments (OLEs), (c) find and share an example of a CLE that is technology supported and subscribes to the CLE principles and characteristics identified, and (d) critique the extent to which the selected CLE example embodies the principles of constructivism. The end product for this assignment is a 20-25 minute in-class presentation that describes the findings of the group with respect to these items. More detail is provided on the course website under assignments.

Online and In-Class Participation   20% of grade

The course includes online and in-class discussions and activities. Online activities include the use of blogs, vlogs, or discussion forums (10%) designed to help you articulate your understanding of the readings, share multiple perspectives and provide constructive peer feedback. In-class activities (10%) include group work and whole group discussions. *Students are expected to come to class fully prepared to discuss the readings*. Rubrics for evaluating class participation are provided on the course website under assignments. **On time class attendance is critical to successful class participation**.

Research Brief   25% of grade

Each student will select a constructivist based pedagogical model (e.g., cognitive apprenticeship, community of practice, situated learning, problem based learning) OR an instructional strategy (e.g., collaboration, articulation, scaffolding, problem solving), OR a problem type (e.g., strategy problem, decision-making problem, design problem, dilemma) and write a **research brief** based on the *5 Things You Need to Know About*: (1) What is it? (2) How does it work? (3) Who is doing it? (4) How effective is it? (5) What are its implications for instructional design? References should include course readings as well as new empirical research related to the selected model or strategy. More detail is provided on the course website under assignments.

Designing a Constructivist Learning Environment (CLE)   30% of grade

In groups of two, students will select a pedagogical model from *Chapter 5 of the Online Learning Text* (see also list under assignments/final project) and will apply a **grounded design approach** to develop **a prototype of the CLE/PSLE** for a specific target audience and learning content. **This is a Performance Based Assessment (rubric provided at end of syllabus).**

The final deliverable for this assignment should include the following **three** components:

1. A proposal (design document) describing the parameters of the CLE/PSLE including the pedagogical model selected; the learning problem (authentic context) or challenge that will engage the target audience; the learning outcomes; characteristics of the target audience; the learning activities; and the assessment approach.

2. A table depicting the grounded design of the CLE/PSLE. The table is a blueprint or storyboard of the prototype and should illustrate the mapping or alignment of four design elements: (1) learning outcomes, (2) instructional strategies (derived from the instructional characteristics of the pedagogical model selected), (3) learning activities or tasks (what the learners will do), and (4) assessment criteria.

3. A prototype of the CLE/PSLE showing the **learning activities** that the learners will engage in. The prototype can be developed in PPT or a technology of your choice (e.g., wiki, LMS, website, Adobe Captivate, etc.).

Grades are based on the successful completion of course requirements and on the scope, quality and creativity of the assignments. To get an A in this course, students should demonstrate critical thinking skills through active synthesis of reading material, integration of prior knowledge and experience, and through problem-solving, argumentation, and reasoning.

Grade distribution is as follows: A + = 97 - 100 (exceeds expectations on all requirements); A = 93 - 96 (meets expectations, excellent performance); A- = 90 - 92 (meets expectations, very good performance), B+ = 86 - 89 (meets most expectations, good performance), B = 83 - 85 (meets most expectations, satisfactory performance); B- = 80 – 82 (meets some expectations, average performance); C = 70 - 79 (notably below expectations).

The instructor reserves the right to deduct up to 10% of an assignment grade per day for late submissions without a valid excuse. Missing more than 2 classes over the semester can also result in grade reduction. If you miss class, it is **your responsibility** to **make up** the work (this includes classwork).

Professional Dispositions
Students are expected to exhibit professional behaviors and dispositions at all times.
See https://cehd.gmu.edu/students/polices-procedures/.

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/.

GEORGE MASON UNIVERSITY POLICIES AND RESSOURCES FOR STUDENTS

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see http://oai.gmu.edu/the-mason-honor-code/).

- 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://ods.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 services, 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/students/**.**

Class Schedule   (*Faculty reserve the right to alter the schedule as necessary, with notification to students*)

Module 1: Learning Paradigms and Instructional Design

Tuesday August 29 (week 1)   **ASSIGN TEAMS FOR EPISTEMOLOGY TABLE**   *f2f class*
- Course intro
- In-class icebreaker activity
- General discussion on learning theories and epistemologies
- Post bios to Blackboard "Meet & Greet" forum
- Post a brief summary of a learning or training design problem that you have recently encountered or solved to Blackboard "Learning Design Problems" forum

Readings/activities to be completed by **Tuesday September 5**
- Ertmer & Newby (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective (Bb)
- Jonassen (1991). Objectivism versus constructivism: Do we need a new philosophical paradigm? (Bb)
- Siemens (2005). Connectivism: A learning theory for the digital age (Bb)
- Provide comments on the "Meet and Greet" and "Learning Design Problems" forums as appropriate
- Explore online resources under Module 1
- Come prepared to share your *objectivism-cognitivism-constructivism-connectivism* comparison table

Tuesday September 05 (week 2)   **ASSIGN TEAMS FOR CLE ASSIGNMENT**   *f2f class*
- Discuss readings/resources, finalize epistemology comparison table

Module 2: Situated Learning, Cognitive Apprenticeship, Communities of Practice

Readings/resources to be completed/explored by **Tuesday September 12**
- Herrington, Reeves, & Oliver (2014). Authentic Learning Environments (Bb)
- Collins (2006). Cognitive apprenticeship (Bb)
- Explore online resources under Module 2

Tuesday September 12 (week 3)   *f2f class*
- Discuss readings/resources, complete related learning activities

Readings/resources to be completed/explored by **Tuesday September 19**
- Communities of Practice: A brief introduction by Etienne Wenger (Bb)
- CoP Primer (Bb)
- Explore online resources under Module 2

Tuesday September 19 (week 4)   *online class*
- Discuss readings/resources online, complete related learning activities
- Work on the CLE assignment

Tuesday September 26 (week 5)   **CLE PRESENTATIONS**   *f2f class*

Module 3: Instructional Design for Constructivist Learning Environments (CLE)/PSLEs

Readings/resources to be completed/explored by **Tuesday October 3**
- Chapters 5 & 6 (Online Learning text) (Bb)
- Explore online resources under Module 3
- Discuss readings/resources online, complete related learning activities

Tuesday October 3 (week 6)   **SELECT TOPIC FOR RESEARCH BRIEF**   *f2f class*
- Discuss readings/resources online, complete related learning activities

Readings/resources to be completed/explored by **Tuesday October 17**
- Chapters 1, 8, & 10 (Learning to Solve Problems text)
- Explore online resources under Module 3
- Discuss readings/resources, complete related learning activities

Tuesday October 10 (week 7)   **DUE TO COLUMBUS DAY**   *no class*
- Work on research brief

Tuesday October 17 (week 8)   *f2f class*
➢ Discuss readings/resources, complete related learning activities

Readings/resources to be completed/explored by **Tuesday October 24**
➢ Dabbagh & Dass (2013). Case problems for problem-based pedagogical approaches (Bb)

Tuesday October 24 (week 9)   *online class*
➢ Discuss readings/resources, complete related class activities
➢ Work on the research brief

Readings/resources to be completed/explored by **Tuesday October 31**
➢ Chapters 7 & 22 (Learning to Solve Problems text)
➢ Chapter 7 (Online Learning text) (Bb)

Tuesday October 31 (week 10)   **RESEARCH BRIEF DUE**   *f2f class*
➢ Discuss readings/resources, complete related learning activities

Module 4: Case-Based Learning, Goal-Based Scenarios

Readings/resources to be completed/explored by **Tuesday November 7**
➢ Chapter 12 &13 (Learning to Solve Problems text)
➢ Hsu & Moore (2011). Formative research on the goal-based scenario model (Bb)
➢ Explore online resources under Module 4
➢ Begin work on Final Project Proposal

Tuesday November 7 (week 11)   *online class*
➢ Discuss readings/resources online, complete related learning activities

Module 5: Problem-Based Learning

Readings/resources to be completed/explored by **Tuesday November 14**
➢ Newman (2005). Problem Based Learning: An Introduction and Overview (Bb)
➢ Dabbagh et al. paper on PBL (Bb)
➢ Explore online resources under Module 5

Tuesday November 14 (week 12)   *f2f class*
➢ Discuss readings/resources online, complete related learning activities

Module 6: Games & Simulations

Readings/resources to be completed/explored by **Tuesday November 21**
➢ Barab, Gresalfi, Ingram-Goble (2010) – Transformational Play (Bb)
➢ Prensky (2001) – Simulations: Are They Games (Bb)
➢ Chapter 14 (Learning to Solve Problems text)
➢ Explore online resources under Module 6

Tuesday November 21 (week 13)   **FINAL PROJECT PROPOSAL DUE**   *online class*
➢ Discuss readings/resources, complete related learning activities

Tuesday November 28 (week 14)   *f2f class*
➢ Guest speakers TBD
➢ Class synthesis
➢ Work on Final Project

Tuesday December 5 (week 15)   **WORK ON FINAL PROJECT**   *no class*

Tuesday December 12 (week 16)   **FINAL PROJECT DUE**   *f2f class*

Assessment Rubric

Rubric for the Performance Based Assessment "Designing a Constructivist Learning Environment (CLE)" (rubrics for the other assignments are available on the course website)

IBSTPI Competency	Criteria	Exceeds Standards	Meets Standards	Does Not Meet Standards
Professional Foundations: 1 **5 points**	**Project Proposal**	All key elements of the project proposal are included and effectively described;	Most key elements of the project proposal are included and effectively described	Key elements of the project proposal are missing OR
Professional Foundations: 2 **5 points**	**Project Proposal**	The selection of the pedagogical model is appropriate for the learning problem	All key elements are covered but the alignment across the elements is not clear	The elements are not described effectively or do not align with the selected pedagogical model
Design & Development: 11 **5 points**	**Design Table**	All key elements of the design table are included	Most key elements of the design table are included and pedagogically aligned	Several elements of the design table are missing
Design & Development: 10 **5 points**	**Design Table**	All key elements of the design table are pedagogically aligned	All key elements of the design table are included but some are not pedagogically aligned	Several elements of the design table are not pedagogically aligned
Planning & Analysis: 9 **5 points**	**Prototype**	Prototype uses appropriate technologies to demonstrate all aspects of the design table	Most aspects of the design table are demonstrated in the prototype using appropriate technologies	Several aspects of the design table are missing in the prototype design
Design & Development: 12 **5 points**	**Prototype**	All aspects of the design table that are applicable or available to the learner and the facilitator are effectively demonstrated	All aspects of the design table are included but some are not effectively demonstrated	Several aspects of the design table are not demonstrated effectively and consistently