

**Advanced Instructional Design**  
**EDIT 730 – 001 - 3 credits (pre-requisite EDIT 705)**  
**Course Syllabus**  
**Spring 2015**



### General Information

**Time:** Tuesdays, 4:30 PM – 7:10 PM  
**Location:** Thompson Hall, L003  
**Instructor:** Dr. Nada Dabbagh  
**Phone:** (703) 993-4439

**Division of Learning Technologies**  
**IDT Program:** <http://learntech.gmu.edu/idt/>  
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### Course Description

**Catalog Description:** Capstone course of three-course sequence on theory and practice of instructional design. Helps students apply ideas developed in prior courses to complete major instructional design project. Covers leading-edge ideas in evolution of instructional design.

*Note:* The catalog description of this course will change in fall 2015 to the following: *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:** The course 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 distributed learning. 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).

**Nature of Course Delivery:** 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.

### Course Objectives (Learning Outcomes)

1. Develop an understanding of epistemological approaches to learning and cognition such as **objectivism, cognitivism, constructivism, and situated cognition**.
2. Be able to **compare** and **contrast** constructivist and objectivist approaches to learning and instruction.
3. Develop an **applied** understanding of **constructivism** and its implications for instructional design.
4. Examine alternative 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/](http://www.ibstpi.org/instructional-design-competencies/)):

- Apply research and theory to the discipline of instructional design (Advanced)
- Update and improve knowledge, skills, and attitudes pertaining to the instructional design process (Essential)
- Use an instructional design and development process appropriate for a given project (Essential)
- Design instructional interventions (Essential)
- Select or modify existing instructional materials (Essential)
- Develop instructional materials (Essential)
- Design learning assessment (Advanced)

## Instructional Resources

### Required Texts:

(1) Learning to Solve Problems: A Handbook for designing problem-solving learning environments (Jonassen), 2011, Routledge, Taylor & Francis. | ISBN-10: **0415871948** | ISBN-13: **978-0415871945**

Additional readings will be on Blackboard and/or provided 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](http://mymason.gmu.edu)

## Learning Activities, Performance Based Assessments, and Grading Policy

### Compare and Contrast Assignment (C&C)

**25% of grade**

In groups, students will identify, and compare and contrast technology supported learning environments (TSLEs) that are rooted in two opposing learning paradigms: objectivism and constructivism. Students will use the theoretical principles of each paradigm to demonstrate contrasting characteristics of the selected TSLEs through a web-based or in-class presentation. The presentation should include: (a) the process used to select the TSLEs, (b) the theoretical principles and research used to compare and contrast the selected TSLEs, (b) screenshots (or equivalent) that highlight the contrasting characteristics of each TSLE example, (c) reading references and research/resources used. More detail is provided on the course website under assignments.

### Online and In-Class Participation

**25% of grade**

The course includes online and in-class discussions and activities. Online activities include the use of blogs or discussion forums (15%) 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.**

### Short Research Paper

**20% of grade**

Each student will select a constructivist based pedagogical model (e.g., cognitive apprenticeship, community of practice, situated learning, problem based learning) and write a short research paper describing the selected pedagogical model, its theoretical underpinnings, instructional characteristics, and citing empirical research that examines the instructional effectiveness of the selected model in various settings. APA style is required. References should include course readings as well as new empirical research related to the selected pedagogical model.

### Designing a Constructivist Learning Environment (CLE)

**30% of grade**

Using the pedagogical model selected for the short research paper, students will apply a **grounded design approach** to develop a **prototype of the CLE** for a specific target audience and learning content selected by the student. The final deliverable for this assignment should include the following **three** components:

1. A proposal (design document) describing the parameters of the CLE 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. 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 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).

**Rubric for Evaluating Designing a Constructivist Learning Environment (CLE) (rubrics for the other assignments are available on the course website)**

Components/Criteria	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations
Project Proposal (10 points)	All key elements of the project proposal are included and effectively described; the selection of the pedagogical model is appropriate for the learning problem	Most key elements of the project proposal are included and effectively described OR all key elements are covered but the alignment across the elements is not clear	Key elements of the project proposal are missing OR the elements are not described effectively or do not align with the selected pedagogical model
Design Table (10 points)	All key elements of the design table are included and pedagogically aligned	Most key elements of the design table are included and pedagogically aligned OR all key elements of the design table are included but not pedagogically aligned	Several elements of the design table are missing or not pedagogically aligned
Prototype (10 points)	Prototype uses appropriate technologies to demonstrate all aspects of the design table that are applicable or available to the learner and the facilitator	Most aspects of the design table are demonstrated in the prototype using appropriate technologies OR all aspects of the design table are included but not effectively demonstrated	Several aspects of the design table are missing in the prototype design OR are not demonstrated effectively and consistently

<b>Course Timeline</b>	<b><i>(subject to change)</i></b>
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**Module 1: Learning Paradigms and Instructional Design*****Tuesday January 20 (week 1)******f2f class***

- Course intro
- General discussion on learning theories and epistemologies
- Post bios and initial idea for final project to Blackboard “Meet and Greet” forum
- Complete the icebreaker activity (see blog area)

**Readings/activities to be completed by Tuesday January 27**

- 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)
- Read bios and project ideas in “Meet and Greet” forum area and provide comments as appropriate
- Explore online resources under Module 1
- Come prepared to share your objectivism-constructivism comparison table

***Tuesday January 27 (week 2)*****ASSIGN TEAMS FOR C&C*****f2f class***

- Discuss readings/resources, complete related activities, develop epistemology comparison table

**Readings/resources to be completed/explored by Tuesday February 3**

- Herrington, Reeves, & Oliver (2014). Authentic Learning Environments (Bb)
- Chapter 1 (Dabbagh/Bannan-Ritland textbook) (Bb)
- A brief introduction to distributed cognition (Bb)
- Explore online resources under Module 1

***Tuesday February 3 (week 3)******f2f class***

- Discuss readings/resources, complete related learning activities

**Module 2: Situated Learning, Cognitive Apprenticeship, Communities of Practice****Readings/resources to be completed/explored by Tuesday February 10**

- Collins (2006). Cognitive apprenticeship (Bb)
- Young (1993). Instructional design for situated learning (Bb)
- Communities of Practice: A brief introduction by Etienne Wenger (Bb)
- Explore online resources under Module 2 (*View the Jasper video*)

***Tuesday February 10 (week 4)******online class***

- Discuss readings/resources online, complete related learning activities
- Work on C&C presentations

***Tuesday February 17 (week 5)*****C&C PRESENTATIONS*****f2f class*****Module 3: Instructional Design for Constructivist Learning Environments (CLE)****Readings/resources to be completed/explored by Tuesday February 24**

- Chapters 5 & 6 (Online Learning text) (Bb)
- Explore online resources under Module 3

***Tuesday February 24 (week 6)*****SELECT PEDAGOGICAL MODEL FOR PAPER*****f2f class***

- Discuss readings/resources, complete related learning activities

**Readings/resources to be completed/explored by Tuesday March 3**

- Chapters 1, 8 & 10 (Learning to Solve Problems text)
- Explore online resources under Module 3

***Tuesday March 3 (week 7)******f2f class***

- Discuss readings/resources, complete related learning activities

***Tuesday March 10 (week 8)*****SPRING BREAK*****no class***

Readings/resources to be completed/explored by **Tuesday March 17**

- Dabbagh & Dass (2013). Case problems for problem-based pedagogical approaches (Bb)

**Tuesday March 17 (week 9)***f2f class*

- APA style writing workshop
- Discuss readings/resources

Readings/resources to be completed/explored by **Tuesday March 24**

- Chapters 7 & 22 (Learning to Solve Problems text)
- Chapter 7 (Online Learning text)

**Tuesday March 24 (week 10)****RESEARCH PAPER DUE***f2f class*

- Discuss readings/resources, complete related learning activities

**Module 4: Cognitive Flexibility Hypertexts, Case-Based Learning, Goal-Based Scenarios**Readings/resources to be completed/explored by **Tuesday March 31**

- 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

**Tuesday March 31 (week 11)***online class*

- Discuss readings/resources online, complete related learning activities

**Module 5: Games, Simulations, Microworlds**Readings/resources to be completed/explored by **Tuesday April 7**

- Barab, Gresalfi, Ingram-Goble (2010) – Transformational Play (Bb)
- Rieber (1996) – Seriously Considering Play (Bb)
- Chapter 14 (Learning to Solve Problems text)
- Explore online resources under Module 5

**Tuesday April 7 (week 12)***online class*

- Discuss readings/resources online, complete related learning activities

**Module 6: Problem-Based Learning (PBL)**Readings/resources to be completed/explored by **Tuesday April 14**

- Dabbagh et al. paper on PBL (Bb)
- Barrows chapter on PBL (Bb)
- Explore online resources under Module 6

**Tuesday April 14 (week 13)****FINAL PROJECT PROPOSAL DUE***f2f class*

- Discuss readings/resources, complete related learning activities

**Tuesday April 21 (week 14)****FEEDBACK ON PROJECT PROPOSAL***f2f class*

- Guest speaker
- Class synthesis

**Tuesday April 28 (week 15)****WORK ON FINAL PROJECT***no class***Tuesday May 5 (week 16)****FINAL PROJECT DUE***f2f class*

## GEORGE MASON UNIVERSITY POLICIES AND RESSOURCES FOR STUDENTS

### *Student Expectations*

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/the-mason-honor-code/>].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- 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 George Mason University 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 must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.
- 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.

### *Campus Resources*

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].
- For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See <http://gse.gmu.edu/>].