

# **SYLLABUS**

## **GEORGE MASON UNIVERSITY**

### **COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT**

#### **INSTRUCTIONAL TECHNOLOGY**

##### **EDIT 705 Instructional Design**

Spring 2007 7:20pm to 10:00pm Mondays

Commerce II, Room 100

#### **PROFESSOR CONTACT INFORMATION**

Robert L. Parrott

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#### **Office Location**

Commerce II, Room \_\_\_\_\_

#### **Office Hours**

Online via AOL IM (DukeDogFan), Google Talk ([rparrott@gmail.com](mailto:rparrott@gmail.com)), or by appointment.

#### **COURSE DESCRIPTION**

##### **Prerequisites**

Teaching, training or technology development or equivalent experience.

## **Course description from the University Catalog**

Helps students analyze, apply, and evaluate principles of instructional design to develop education and training materials spanning a wide range of knowledge domains and instructional technologies. Focuses on a variety of instructional design models, with emphasis on recent contributions from cognitive science and related fields.

## **Nature of Course Delivery**

Face-to-face / Online discussion and lecture (generally alternate weeks with some exceptions) blended-format course

## **REQUIRED TEXT**

Brown, A. & Green, T.D. (2006). *The essentials of instructional design*. Upper Saddle River, NJ: Pearson, Prentice Hall.

Ertmer, P.A. & Quinn, J. (2007) *The ID casebook: Case studies in instructional design*. Upper Saddle River, NJ: Pearson, Merrill, Prentice, Hall

Additional relevant online readings / resources reviewed on specific weeks.

## **STUDENT OUTCOMES**

At the end of this course you should be able to:

- Define instructional design
- Give examples of the practice of instructional design
- Compare and contrast models of instructional design
- Debate existing perspectives on learning
- Gather and analyze data related to an identified instructional need
- Create a production calendar for a prototype development
- Conduct a basic task analysis using an identified technique
- Conduct a basic learner analysis
- Write instructional and / or performance objectives
- Determine types or levels of learning addressed
- Articulate design approach based on the learning environment and corresponding instructional activities and strategies
- Create storyboard and navigation layouts
- Produce limited prototype of design concept using electronic media of choice (e.g. PowerPoint, Camtasia, Captivate, Dreamweaver, etc.)
- Conduct peer reviews / formative evaluations of prototypes and report on findings
- Describe how summative evaluation of learning environment might take place

## COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS

All students must abide by the following:

- Students are expected to exhibit professional behavior and dispositions. See <http://gse.gmu.edu> for a listing of these dispositions.
- Students must follow the guidelines of the University Honor Code. See [http://www.gmu.edu/catalog/apolicies/#TOC\\_H12](http://www.gmu.edu/catalog/apolicies/#TOC_H12) for the full honor code.
- Students must agree to abide by the university policy for Responsible Use of Computing. See <http://mail.gmu.edu> and click on *Responsible Use of Computing* at the bottom of the screen.
- Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See [www.gmu.edu/student/drc](http://www.gmu.edu/student/drc) or call 703-993-2474 to access the DRC.

### COURSE REQUIREMENTS

#### Attendance

Attendance in both face-to-face and online sessions is crucial to your success in this course. If you know you will be absent from class or online sessions, please be considerate and email me before (preferred) or shortly after class. Please also consider your classmates and group members if you are going to be absent and inform them. You are required to contribute to assignments and group responsibilities.

#### Discussion / Project / Presentation Assignments

A schedule will be circulated the first night of class for selecting dates for an individual face-to-face and online instructional design case discussions based on the Ertmer & Quinn book. Students will also sign up for an individual design review session to be conducted face-to-face and online during particular weeks. Each student is expected to keep the relevant individual design project materials updated and uploaded by the following Friday at 9am, the official due date for the weekly development of the individual design project materials. The progressive completion of small portions of the individual design project across the semester is deliberately designed to promote high-level thinking about the training issues and to allow for revision, as well as avoid any last minute rush of production at the end of the semester. If you are absent, you are still expected to upload the current phase of your project by Friday morning of the class week. A written warning will be emailed, if you have not submitted an assignment a significant amount of time after the official due date. Each warning is equivalent to a half grade deduction.

## **Communication**

It is each student's responsibility to communicate with me when an assignment or class content requires clarification or about any other concerns regarding this course. I am available to discuss them with you via email, office hours (by appointment), or by phone. Online course discussions will be monitored frequently. Classroom activities and this course syllabus are subject to change based on my determination of the needs of the class.

## **Cell Phones**

As a courtesy to me and your fellow classmates, please reduce cell phone volume to off or vibrate. If you need to take a call, begin the call outside of the classroom and conduct your call out of earshot of the open classroom door.

## **PERFORMANCE-BASED ASSESSMENTS**

### **Instructional Design Case / Experience Discussions (25%)**

Each student will **summarize** and present two instructional design case studies from the Ertmer and Quinn text in class, as well as online. Students will select dates for both their presentations across the semester. During a week that is scheduled online, students need to upload their case review by regular class time (Monday at 7:20pm) the week that we discuss the case.

Students will be expected to have read the case being discussed, review the preliminary analysis questions and implications for ID practice at the end of each chapter, and **go beyond the material presented in the text by connecting prominent issues in the case to personal experience or other research / applied information in the field of instructional design (e.g., academic journal publications, applied work contexts, learning theory, professional organizations in the field, relevant online materials, etc.)**. The format of the presentations is open but should be an attempt to design an **engaging** online classroom learning experience. Creativity is encouraged as well as exploration into the affordances of both face-to-face and online learning environments (for example, role-playing, game-based, online synchronous / asynchronous approaches as well as engaging presentations, teaching and learning experiences or other instructional / training approaches). This is your opportunity to try out new learning or training techniques / technologies in a safe environment so the whole class can learn from the experience.

### **Design Brief / Prototype (50%)**

Students will apply the instructional design process and related techniques to an individual training problem of choice. Students will progressively produce an electronic presentation across the semester detailing their instructional design process, design concept and limited prototype and upload it to the course site design brief using software

of choice (e.g. PowerPoint, Camtasia, etc.). The presentation should include these elements:

- Description of instructional design problem
- Informal or formal analysis of needs analysis data
- Identified Instructional Goal
- Production calendar or project management plan
- Task analysis
- Learner analysis
- Instructional goals and objectives
- Description of design approach for learning environment and articulated instructional activities and strategies
- Storyboard and navigation layout or flowchart
- Limited prototype of design concept using electronic media of choice that communicates essence of the idea and would convince a client that you would be the right designer for this project (e.g. PowerPoint, Camtasia, Captivate, Dreamweaver, etc.)
- Initial Peer review, testing or formative evaluation of prototype and analyze findings
- Summative evaluation plan

### **Design Reviews (25%)**

Students will update and upload their design brief and prototype on a weekly basis (by Friday morning following class) relevant to the previous class content. Each student will present a short description of his or her design concept and project status to date in face-to-face class sessions or at scheduled points online. Students will be expected to walk the class through their design project / presentations to that point connecting their work to class learning and outside experiences related to instructional design. Peer reviewer(s) will be expected to ask questions and prompt discussion of instructional design issues related to the individual projects. The purpose of these reviews is to provide constructive feedback to each other's projects.

### **Logistics**

#### **\*\*Required Portfolio Elements for IT Students (EDIT601/EDIT701)**

If you are a student in the IT program, it is strongly suggested that you retain your design brief / prototype elements produced in this course for your required online Masters electronic portfolio assessment process at the mid-point and end of your coursework (EDIT601/701). You may also want to document the feedback from your peers and indicate what elements of the design were adjusted based on collected feedback. You will be asked to reflect on your learning within this course and the best time to formulate those reflections is when you are currently in the course. Please retain these electronic materials for your required portfolio assessment.

## Mason Email Account and IT Listserv

As a GMU student, you will need to acquire a GMU email account. Contact the IT Support Center (<http://itusupport.gmu.edu/student.asp>) to activate your account. If you are an IT student, please also subscribe to the IT Listserv which will post job opportunities, program announcements, etc. Directions about how to subscribe can be located on the IT Program website (<http://it.gse.gmu.edu/itlist.htm>).

## COURSE RESOURCES

All assignments, announcements, and updates will be available on the course website via WebCT. Please, check this weekly, as new course materials will be posted progressively throughout the course.

## TENTATIVE CLASS SCHEDULE

Week	Date	Topics, Activities Monday	Assignments for Friday Readings for Monday
1	01/28/07 Face-to-Face	Introductions, Logistics Overview of Course <a href="#">ISD Competencies Self-Assessment</a>  Review of WebCT	Upload detailed bio  Readings – Brown & Green Chapter 1  Readings – Ertmer & Quinn Case Study 24: David Jimenez  Check course site for any online additional readings
2	02/04/07 Online	Asynchronous Discussion: What does the process of design mean to you?  <a href="#">The field of instructional design</a>  <a href="#">One definition</a> of instructional design  Compare and contrast <a href="#">ISD models</a>  Case study 24 discussion: David Jimenez  <a href="#">Review similar design documents/prototypes</a>	Prior to accessing other resources, contribute to the online discussion about what design means to you.  Readings – Brown & Green Chapters 2-3  Readings – Ertmer & Quinn Case Study 15: Beth Owens  Check course site for online additional readings

3	02/11/07  Face-to-Face	<p>Classroom Discussion: Thinking and Cognition</p> <p><a href="#">Review of behaviorism, cognitivism, constructivism</a></p> <p>Levels of learning: foundation of ISD</p> <p><a href="#">Bloom's Taxonomy</a></p> <p><a href="#">Brain-based learning</a></p> <p>Case study 15: Beth Owens</p>	<p>Debate on the relative merits of behaviorism, cognitivism and constructivism in small groups.</p> <p>Readings – Brown &amp; Green Chapters – 4</p> <p>Readings – Ertmer &amp; Quinn Case Study 26: Diane King &amp; Case Study 27: Austin McGwire &amp; Ken Casey</p> <p>Check course site for online additional readings</p>
4	02/18/07  Online	<p>Media &amp; Production</p> <ul style="list-style-type: none"> <li>• Project Management</li> <li>• Storyboard</li> <li>• Flowcharting</li> <li>• Usability testing</li> </ul> <p>Case study 26: Diane King</p> <p>Case study 27: Austin McGwire &amp; Ken Casey</p> <p><a href="#">ISD &amp; Rapid Prototyping</a></p>	<p>Application: Think through and upload a rough production plan / calendar for the instructional design of your prototype this semester.</p> <ul style="list-style-type: none"> <li>• consider the ISD process</li> <li>• consider familiarity with media</li> <li>• consider scope</li> <li>• consider a 10-week or so schedule</li> <li>• consider a rapid prototyping approach</li> </ul> <p>Readings – Brown &amp; Green Chapter – 5</p> <p>Readings – Ertmer &amp; Quinn Case Studies 4: Suzanne Gardner &amp; 8: Maya Thomas</p> <p>Check course site for online additional readings</p>
5	02/25/07  Online	<p>Needs Analysis</p> <p>Sample needs analysis</p> <p>Discussion: Elements of needs analysis – always necessary? What type of data could we collect for needs assessment?</p>	<p>Application – upload drafts of needs analysis relevant to individual problems, read others and post at least 2 questions about others' drafts. Revise your own based on feedback and questions.</p> <ul style="list-style-type: none"> <li>• what is the instructional/training problem</li> </ul>

		Case study 4: Suzanne Gardner  Case study 8: Maya Thomas	<p>you are attempting to address?</p> <ul style="list-style-type: none"> <li>• how well do you understand the problem?</li> <li>• what level of needs analysis is required?</li> <li>• who might you talk to?</li> <li>• what data might you collect?</li> <li>• how would you analyze it?</li> </ul> <p>Readings – Brown &amp; Green Chapters – 6</p> <p>Readings – Ertmer &amp; Quinn Case Studies 18: Abby Carlin &amp; 10: Ross Caslon</p> <p>Check course site for online additional readings</p>
<b>6</b>	03/03/07  Face-to-Face	Task Analysis  Design Reviews  Case study 18: Abby Carlin  Case study 10: Ross Caslon	<p>Application - upload drafts of task analysis relevant to individual design/prototype</p> <p>Readings – Brown &amp; Green Chapters – 7</p> <p>Readings – Ertmer &amp; Quinn Case Studies 28: Natalie Morales &amp; 31: Alan Wydell</p> <p>Check course site for online additional readings</p>
<b>7</b>	3/10/07  Spring Break	No Class	No Assignments
<b>8</b>	03/17/07  Online	Learner Analysis  Contextual Analysis  Design Reviews  Case study 28: Natalie Morales  Case study 31: Alan Wydell	<p>Application – upload drafts of learner/contextual analysis relevant to individual design/prototype.</p> <p>Readings – Brown &amp; Green Chapters – 8</p> <p>Readings – Ertmer &amp; Quinn Case Studies 2: Denny Clifford, 21:</p>



			<p>Craig Gregersen, &amp; 19: Iris Daniels</p> <p>Check course site for online additional readings</p>
<b>9</b>	03/24/07 Face-to-Face	<p>Developing instructional goals and objectives</p> <p>Design Reviews</p> <p>Case study 2: Denny Clifford</p> <p>Case study 21: Craig Gergersen</p> <p>Case study 19: Iris Daniels</p>	<p>Application – upload drafts of instructional goals and objectives</p> <p>Readings – Brown &amp; Green Chapters – 9</p> <p>Readings – Ertmer &amp; Quinn Case Studies 5: Don Garthon and Susan Harper &amp; 11: Jennie Davenport and Pedro Lopez</p> <p>Check course site for online additional readings</p>
<b>10</b>	3/31/07 Online	<p>Organizing instruction</p> <p>Scope and sequence</p> <p>Flowcharting</p> <p>Design Reviews</p> <p>Case Study 5: Don Garthon and Susan Harper</p> <p>Case Study 11: Jennie Davenport &amp; Pedro Lopez</p>	<p>Application – upload drafts of scope / sequence / organization of instruction or training in flowchart. Begin work on design prototype development.</p> <p>Readings – Brown &amp; Green Chapters – 10</p> <p>Readings – Ertmer &amp; Quinn Case Studies 2: Scott Allen &amp; 6: Jacci Joya</p> <p>Check course site for online additional readings</p>

<b>11</b>	03/31/07  Face-to-Face	Learning Environments  Design Reviews  Case study 2: Scott Allen  Case Study 6: Jacci Joya	Application – Work on design prototype. Upload drafts of executive summary of learning environment / activities, grounded in what theoretical perspective on learning?  Readings – Brown & Green Chapters – No readings this week  Readings – Ertmer & Quinn Case Studies 12: Malcolm Gibson, 25: Davey Jones, & 16: Frank Tawl and Semra Senbetto  Check course site for online additional readings
<b>12</b>	04/07/07  Online	Student facilitated class  Design Reviews  Case Study 12: Malcolm Gibson  Case Study 16: Frank Tawl and Semra Senbetto  Case Study 25: Davey Jones	Application: Work on further development of design prototype  Readings – Brown & Green Chapter 11  Readings – Ertmer & Quinn Case Studies 30: Andrew Stuart & 32: Andrew Brown and Deborah Frye
<b>13</b>	04/14/07  Face-to-Face	Evaluating / Assessing Learner Achievement  Design Reviews  Case Study 30: Andrew Stuart  Case Study 32: Andrew Brown and Deborah Frye	Application: Work on design prototype. Create learner assessment for design prototype.  Readings – Brown & Green Chapter 12  Readings – Ertmer & Quinn Case Study 14: Ricardo Martinez
<b>14</b>	04/21/07  Online	Formative / Summative Evaluation and Usability  Design Reviews  Case Study 14: Ricardo Martinez	Application: Create formative evaluation plan to gather additional peer feedback  Readings – Ertmer & Quinn Case Studies 1: Scott Allen, 9: Jackie Adams, & 22: Scott Hunter
<b>15</b>	04/28/07	Design Reviews	Application: Gather, analyze and summarize formative feedback from

	Face-to-Face	Case Study 1: Scott Allen Case Study 9: Jackie Adams Case Study 22: Scott Hunter	peers
<b>16</b>	05/5/07 Online	Upload Design Prototype	Application: Final student commentary on design prototypes
<b>17</b>	05/12/07 Online	Grades and Feedback available online	

## EVALUATION CRITERIA

<b>Criteria - Design Cases</b>	<b>No Evidence</b>	<b>Limited Evidence</b>	<b>Clear Evidence</b>
Actively led discussion on date selected			
Descriptive summary of case			
Thorough understanding / analysis			
Connections made from case to experience / articles / theory / applied practice, etc.			
Attempts at creative format, engagement of audience and consideration of affordances of media			
<b>Criteria - Design Reviews</b>	<b>No Evidence</b>	<b>Limited Evidence</b>	<b>Clear Evidence</b>
Design brief / prototype components uploaded weekly			
Active participant in reviews of others work			
Design brief / prototype presented on-time in an engaging way			
Connections made to experiences in / outside class			
Respectful constructive feedback provided			

<b>Criteria – Design Brief/Prototype Presentation</b>	<b>Not Persuasive</b>	<b>Somewhat Persuasive</b>	<b>Very Persuasive</b>
Phase 1) Clear description of problem			
Needs analysis data collected, analyzed and documented			
<ul style="list-style-type: none"> <li>• Description of intervention that will address problem</li> </ul>			
<ul style="list-style-type: none"> <li>• Analysis of learner characteristics and how the environment relates to the problem.</li> </ul>			
<ul style="list-style-type: none"> <li>• Articulated instructional goal and objectives</li> </ul>			
Phase 2) Description of logical design approach, strategies and activities			
<ul style="list-style-type: none"> <li>• Sample storyboards, flowcharts of prototype</li> </ul>			
<ul style="list-style-type: none"> <li>• Limited, professional-looking prototype depicting design idea</li> </ul>			
Phase 3) Collection and analysis of peer evaluation of prototype and plan for summative evaluation			

## **Grading**

The assessment of learning in this course will be based on a criterion model. The ID cases and design reviews will use a competency based model in that if there is clear evidence in face-to-face and online interactions that an individual has met the criteria, then he or she will gain full credit. For the design brief / prototype, each major phase of the instructional design prototype will be assessed as a potential client might evaluate a design concept in a realistic setting. The work and importance that an individual places on the first phase of the design greatly impacts the quality of the following two major phases. Therefore, it is highly suggested you place increased effort on the first phase (e.g., understanding the problem, audience, context) to ensure higher evaluations as you progress through the process.

Particular components of the design brief / prototype may be improved throughout the semester based on additional learning of the process through modeling of others' work

and cycles of feedback by peers and the instructor. At the individual design review and conclusion of the semester, judgments will be made as to the level of persuasiveness of the design concept by other designers in the class. This input will be considered by the professor who will assign the mid-point and final grade.