

Effective Teaching with Technology

COE Engineering Professional Development 690: Special Topics

CALS Interdisciplinary Courses 875: Special Topics

L&S Interdisciplinary Courses 701 Topics: Graduate Students in Teaching

Fall, 2007 Wednesdays, 2:30-4:30 PM

Digital Media Center (Room 1240 Genetics/Biotechnology Center)

Course Overview

This course is designed for graduate students, postdoctoral fellows and faculty in science, technology, engineering, and mathematics (STEM) fields who desire to develop new approaches to the effective use of instructional technology in their teaching practice. The goals of this course are:

- to provide participants with a foundation for choosing appropriate technological tools based on learning needs,
- to give participants hands-on experience, through class sessions and an independent project, in the effective use of learning technologies such as interactive web applications, video/audio lectures, "clickers", and course management tools, and
- to promote the importance and scholarship of the evaluation of instructional technology efficacy.

This course is appropriate for anyone interested in improving student learning with technology, regardless of prior teaching or technological experience.

The course is offered within the context of the CIRTL principles of Teaching-as-Research and celebration of diversity. Students will be encouraged to reflect and participate in these principles through the Delta learning community

Teaching as Research

Teaching-as-research involves the deliberate, systematic, and reflective use of research methods to develop and implement teaching practices that advance the learning experiences and learning outcomes of students and teachers.

Diversity

This course will provide perspectives on the effective use of technology in teaching and learning by introducing the prism of a diverse student cohort to this issue. We encourage all participants to offer their personal perspectives on all aspects of the course to provide a rich environment to learn from each other about how we individually view technology and its use in teaching and learning. All individual viewpoints will be respected.

Course Format

During each session of the course, a different aspect of teaching with technology will be investigated. We want the classroom environment to resemble a “research-group” meeting, rather than a “lecture”. Experts will be present to facilitate discussion and provide insight. In addition to the seminar portion of the course, participants will also have opportunities to experiment with several instructional technologies throughout the semester. Participants will see how the teaching-as-research philosophy applies to effectively teaching with technology, as well as how their technological choices can affect (both positively and negatively) their diverse student population. Throughout the course the participants will develop a project in which they identify, investigate, and propose solutions to a learning environment where technology could be implemented. The projects will be showcased at the end of the semester and evaluated by the course participants and instructors.

Required Course Readings/Texts

All readings will be available electronically on the course website.

Course Components

1. Course readings and discussion

For some of the classes, a small set of key readings will be assigned. Optional readings will also be posted to the course website as resources.

3. Reflection papers

Twice during the semester you will be asked to write a 1-2 page reflection paper in response to a specific question. These will be submitted in the online dropbox found on the course website.

4. Project

The project is intended to give you hands-on experience in identifying learning outcomes, choosing and designing suitable technology solutions, and evaluating the results. You will choose a project to work on, in consultation with one or more instructors. You may work with a partner if you wish. Evaluation of your project will be part of your overall grade, so you must select a project that you have an opportunity to evaluate this semester, in a classroom or with an approved pilot audience. Most students complete projects related to classes that they have/or will TA(ed) or work with a faculty mentor on a class of interest to their mentor. You should consider a project that is challenging, but not overly ambitious. Completing a small activity in all aspects is preferable to just getting started on a large one. You will be asked to identify your project after the first class, and we expect that you will work on it throughout the semester. The syllabus outlines the various due dates for project steps. At the end of the semester, you will have the opportunity to showcase your project and present results to the class. The project is the main out-of-class activity in this course. We have kept other assignments to a minimum to allow you the time to devote to your project.

Description of Project Milestones

Due Date	Assignment	Topic/Details
<p><i>Week 2</i></p> <p>September 12</p>	Project Idea	<p>Prepare a 1 paragraph general description of your proposed project which addresses the following:</p> <ul style="list-style-type: none"> • Define the learning problem that you will address • Identify the audience for your project • Describe any technologies that might help you address the learning problem
<p><i>Week 3</i></p> <p>September 22</p>	Learning Plan	At the end of class you will turn in a learning plan for your project. You will work on this as an in-class activity.
<p><i>Week 4</i></p> <p>September 26</p>	Summary	Provide a 1-2 paragraph summary of your meeting with your project coach.
<p><i>Week 5</i></p> <p>October 3</p>	Reflection Paper 1	What have you learned in considering diverse audiences that has affected your project? How has this discussion changed your view of teaching at the college level? (1-2 pages)
<p><i>Week 7</i></p> <p>October 17</p>	Evaluation Plan	<p>Provide a description of the evaluation plan for your project. Include:</p> <ul style="list-style-type: none"> • The learning outcomes that you have established • The data that you will collect to help you determine if you met the learning outcomes • How you will gather the data, from whom and when • The resources (inputs) that you need to carry out your evaluation project
<p><i>Week 8</i></p> <p>October 24</p>	<p>In-class Presentation</p> <p>(5 minutes plus 2 minutes for questions)</p>	<p>Presenters: Describe the research problem that initiated your project, the technology you are using, and the expected outcome; must include reference to evaluation.</p> <p>Peer evaluation forms will address the following questions:</p> <ol style="list-style-type: none"> 1. Was the research idea presented clearly and effectively? 2. Is the audience appropriate for the problem? 3. Is the technology appropriate? 4. What one suggestion can you offer to enhance the project? Please be specific.
<p><i>Week 9</i></p>	Peer evaluation comments	Comments for peer evaluation are due to the presenter. Each student will be asked to provide peer evaluations for 2 projects.

October 31		
<i>Week 10</i> November 7	Reflection Paper 2	How would you describe the learning community that exists within your project 'setting'? How will your project affect the existing community? (please be specific, 1-2 pages)
<i>Weeks 14&15</i> December 5,12	In Class Presentations	Describe overall project and evaluation results. (15 min)
<i>Finals Week</i> December 19	Final project narrative due at 5 pm	In the form of a scientific paper, describe your project, including learning goals, learning outcomes, methods, data, results and evaluation. (5-10 pages)

Evaluation

The course will be graded on a standard A-F graduate-level grading scale. Following is a description of the project assignments:

Two reflection papers: 30%

Students are expected to thoughtfully reflect on the topics. Full credit will be given unless topic is addressed in a cursory manner.

Class participation and assignments: 20%

Attendance, handing assignments in on time, asking questions, thoughtful remarks and insights, etc. are what we are looking for. There is no "right answer" and no "dumb question". We want everyone to grow in their understanding of effective teaching with technology and to spend time reflecting on TAR.

Project: 50%

Considering the nature of the course and academic level of the participants, we expect that all graded assignments and class participation will be at a high point of achievement. The course does not require a strong background in technology, so we will be evaluating the ability of each student to adequately choose, outline, implement and evaluate a project with an appropriate audience.

Late policy

Late papers and incompletes will involve penalties as a matter of fairness and courtesy to everyone in the class. Instructors will not be able to provide extensive written feedback for late papers. Students who submit late or incomplete assignments will receive lower marks unless arrangements have been made with the instructors.

Contact information for *DELTA Effective Teaching with Technology team members*:

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For more information about DELTA, please visit our website: <http://www.delta.wisc.edu>

Course Schedule

Class Date	Topic and Instructors	Assignments due (in addition to readings)
<i>Week 1</i> September 5	Introduction and overview of technology HTML hands-on session (Blanchard, Wolf)	
<i>Week 2</i> September 12	The College Classroom: What is TAR? (Sieg1??)	Project: Initial ideas
<i>Week 3</i> September 19	The College Classroom: Learning plans (Sieg1??)	Learning Plan (end of class)
<i>Week 4</i> September 26	Meeting teaching challenges with technology (including universal design) (Anderson ??)	- Summary of Coach Meeting 1
<i>Week 5</i> October 3	Social Technologies Blogs and wikis Hands-on (Blanchard / Wolf)	-Reflection Paper 1 (Diversity)
<i>Week 6</i> October 10	Student Assessment / Clickers (Wolf / Guest)	
<i>Week 7</i> October 17	Online Content Creation Video Hands-on session (Wolf)	
<i>Week 8</i> October 24	Project Reports (in class)	Project: Evaluation Plan Peer Reviews Assigned
<i>Week 9</i> October 31	Podcasting Podcasting hands-on (Cheetham?)	- Peer evaluation comments due
<i>Week 10</i> November 7	Distance Education (Blanchard)	-Reflection Paper 2 (Community) -Summary of peer evaluation
<i>Week 11</i> November 14	OPEN - TBD	
<i>Week 12</i> November 21	OPEN -- THANKSGIVING HOLIDAY	

<i>Week 13</i>		
November 28	Animation Flash (Blanchard)	
<i>Week 14,15</i>	Project Presentations	
December 5/12		
<i>Finals Week</i>	December 22 – Final project reports due.	Final project report due on 12/22/06 at 5PM