CEP 811: ADAPTING INNOVATIVE TECHNOLOGIES TO EDUCATION
Michigan State University

PURPOSE OF THE COURSE

The underlying purpose of the Educational Technology Certificate Program is to improve teaching and enhance learning through technology. In CEP 811, the emphasis is placed on instructional applications of technology. In particular, we focus on the Internet and multimedia as contexts for discussion, development, and analysis of the role of technology in learning in K-12 settings.

COURSE TOPICS

➢ *Learning issues in the context of educational technology*
➢ *Development and evaluation of desktop multimedia stand-alone instructional resources*
➢ *Development and evaluation of web-based educational resources*
➢ *Learning about the role of Web 2.0 technologies and their impact in the classroom*

COURSE OBJECTIVES

Upon completion of this course, it is expected that students will understand:

➢ *Ways in which interactive computer technology may be employed in direct support of independent student learning.*
➢ *Roles that Internet-based tools and resources may be effectively used in classrooms in support of educational goals, including issues related to online safety and fair use of online materials.*

Upon completion of this course, it is expected that students will know how to:

➢ *Create stand-alone instructional resources in a desktop presentation development environment as well as in a web environment in support of educational goals.*
➢ *Create and publish a Web page designed to be an introduction to an electronic portfolio. The electronic portfolio will demonstrate support of educational goals for communicating with various audiences including students, teachers, parents and community members. (The portfolio will be completed in 812.)*
➢ *Design, create, and publish a web-based inquiry learning experience for use by their own students.*
➢ *Evaluate web-based applications and their use in the classroom.*

IMPORTANT INFORMATION

MSU Minimum GPA Policy

MSU, the College, the CEPSE Department, and the MAET program all have a policy that requires MA students to maintain a minimum cumulative GPA. "If, upon completion of 18 or more graduate credits, the student has not attained a grade–point average of 3.00 or higher, he or she becomes ineligible to continue work toward the master's degree in the College." - *from Academic Standards, University Graduate Policy - Education, p. 1.*

MSU Minimum Course Grade Policy

There is also a policy regarding credit and grades for MA courses. According to MSU policy, students cannot receive credit for any course with a grade below 2.0. You will

have to take an extra course if you earn below a 2.0 grade on any course. "In particular graduate programs the number of 2.0 grades acceptable for credit may be expressly restricted and/or levels higher than the 2.0 minimum may be established for the fulfillment of degree requirements." (In the MAET program, no 2.0 grades can be applied toward your degree) - *from MSU General information, policies, procedures, and regulations, p. 22.*

Academic Honesty Policy
"The principles of truth and honesty are recognized as fundamental to a community of teachers and scholars. The University expects that both faculty and students will honor these principles and in so doing protect the validity of University grades. This means that all academic work will be done by the student to whom it is assigned, without unauthorized aid of any kind. (See General Student Regulation 1.00, Scholarship and Grades, for specific regulations.) Instructors, for their part, will exercise care in the planning and supervision of academic work, so that honest effort will be positively encouraged." - *from MSU General information, policies, procedures, and regulations, p. 24.*

LATE WORK POLICY

In an online course it is easy to get behind on your assignments. In some cases certain assignments build upon others so it is imperative that you complete all the assignments on time. You have plenty of notice with your assignments, so last minute glitches and minor illnesses are not acceptable excuses. You should anticipate computer troubles. Things like erasing your files, losing your files or media storage, and/or computer problems should be considered possible events when trying to complete your work so give yourself plenty of time to submit an assignment. All graded assignments will be accepted late for these penalties:

2 days late subtract 10%
3-4 days late subtract 20%
5-7 days late subtract 50%
more than 7 days late subtract 100%

GRADING SCALE
- All work is submitted to the portfolio website and grading will be based upon successful completion of the course portfolio. Grades for each assignment will be posted on the course portfolio website.
- Grade percentage totals for work submitted are available at the bottom of the student portfolio page.
- A 4.0 will be given for a total of 94% or higher (if all assignments have been completed), 3.5 for 87%-93%, and 3.0 for 80-86%.
- Expectations: All work should be spell-checked, grammar-checked, and proofread BEFORE submission. Again, a reminder that all assignments must be submitted and a total percentage of 94% or higher attained to receive a grade of 4.0.
- Students may resubmit any assignment ONCE, to improve a grade.

Session 1
- Course Overview
- Teaching in the 21st Century
- Principles of Computers-based Instruction
- Instructional Design
- PowerPoint Kiosk Mode
- Creating a Reflection Blog

Session 2
- FTP Tutorial
- Introduction to Web Publishing
- Web Design
- Introduction to WebQuests
- Computer-Based Instruction Objects

Session 3
- Lessons from Constructivism
- Introduction to Creating WebQuests
- Ethical Uses of the Internet
- Teaching and Computer-Based Instructional Materials

Session 4
- Web 2.0
- Web 2.0 continued
- Idea-based Learning
- Whose Pedagogy is it Anyway?
- Instructional Strategies

Session 5
- Web-based Collaboration
- Benefits and Challenges of Web 2.0
- Issues Related to Web 2.0 technologies

Session 6
- Professional Development for Technology Integration
- An Introduction to Electronic Portfolios
- Creating a Classroom Website

Session 7
- Introduction to Online Learning
- Online Teaching and Learning

Session 8

- StAIR and WebQuest Presentations and Discussion

READINGS

Prensky, Marc. (2006) Listen to the Natives. *Educational Leadership*. December 2005/January 2006.

Lamb, Annette. (Oct. 2004) Key Words in Instruction: Webquests. *School Library Media Activities Monthly;* Oct 2004; 21, 2; Education Module pg. 38.

Fryer, W. (2003) Copyright 101 for Educators. techLearning.com

Yoder, M. (September, 2006) Adventures in Electronic Constructivism. *Learning & Leading with Technology. 34*(1).

Warlick, D. (Oct 2006). A day in the life of Web 2.0: the latest powerful online tools can be harnessed to transform and expand the learning experience. *Technology & Learning* 27(3) p. 20-25.

Ferdig, R., & Trammell, K. (2004) Content Delivery in the 'Blogosphere". *T.H.E Journal.*

Schools and Online Social Networking by Nancy Willard (Published by Education World)

The Michigan Merit Guidelines: Online Experience

Michigan Merit Curriculum Online Experience Guideline Companion Document

REQUIREMENTS AND GRADING FOR CEP 811

WebQuest: Evaluation of an Existing WebQuest

Description   **15 points**

Select and evaluate an existing WebQuest that is appropriate for your own use in your professional setting. See http://webquest.org/ for examples, or do a web search for WebQuest and the topic of interest for you. Your evaluation will be in a word document.

Content Requirements

Your evaluation should provide a thoughtful review of an existing WebQuest that is appropriate for your own use in your professional setting. It should address at least the following issues:

1. Synopsis of the WebQuest including its intended audience, its educational goals, and the curriculum standards addressed if stated.

2. What pedagogical strategies are employed in the WebQuest and are they effective? Is there use of metaphor? Are they using inductive or deductive strategies? Is there scaffolding? What other strategies do you see? (Refer to the *Principles of Computer-Based Instruction* presentation.)

3. In what ways is the WebQuest taking advantage of technology? In what ways is it 'change without difference'? Could this WebQuest be done just as well by photocopying pages and handing them out to students?

4. Technically, does it work? Does it have bugs or flaws such as broken links or images? Is the material out of date? Does it credit its sources?

5. How would you improve the WebQuest?

Technical Requirements

Create and publish a Web page that:

1. Contains a link to the WebQuest

2. Contains at least one screen shot of the WebQuest

3. Contains an active link with your e-mail address for feedback on your evaluation

WebQuest: Design

Description	10 points

Design a WebQuest that you can use in your own professional setting.

Content Requirements

Use the WebQuest Design Template as a basis for your design. Right click on the link and save it to your computer. (The green text gives the directions for each section--thus you would type over the green text with your responses.) This design template is only for planning your WebQuest. In the WebQuest Creation and Publishing assignment we are giving you a link to a template that is an html page you can actually use to create your WebQuest.

Technical Requirements

Submit a Word document that contains your responses to the issues raised in the WebQuest Design Template.

WebQuest: Creation of a WebQuest

Description	45 points

Create and publish a WebQuest that you can use in your own professional setting. To help you with this assignment we have provided you with Web page templates. Go to http://edutech.msu.edu/online/Webquests/UsingtheWebquestPageTemplate.doc to download the directions for the templates.

Content Requirements

The standard WebQuest building blocks are:

1. Introduction/statement of purpose

2. The task students are to perform

3. The process students are to follow (including the Web resources they are to use and the produce they are to create)

4. How they are going to be evaluated

5. The conclusion

6. A teacher page

The teacher page of the WebQuest must appear clearly somewhere in your WebQuest and should answer at least these questions:

1. Who is the intended audience?

2. What is the intended subject matter and outcome? Identify the curriculum learning objectives being met by your WebQuest. You may want to refer to:

    o The ISTE National Educational Technology Standards for Students

    o The Michigan Curriculum Framework

    o METS (Michigan Educational Technology Standards)

- Curriculum standards from the National Council for the Social Studies
- The Principles and Standards for School Mathematics from the National Council of Teachers of Mathematics

3. What pedagogical strategies does the WebQuest employ?

4. Contact information for you as the author

Technical Requirements

The WebQuest must be published as a Web page that includes at least the following features:

1. Page-level properties (including a page title and an appropriate color scheme)

2. Appropriate paragraph and text formatting

3. Appropriate images

4. Links to relevant websites

5. You may use advanced Web features (e.g., tables or frames, dynamic elements)

6. You may design either a single Web page or a multiple page website for this WebQuest

Web page: Creation and Publishing

Description   20 points

Your published Web page

Content Requirements

This web page will be the first page in your portfolio. In 812 you will create a multi-page site. Your index page will contain a written introduction. Remember this will be the first page people see when they visit your site. Therefore, you will have to keep in mind your intended audience when writing your introduction.

Technical Requirements

Create a Web page on the Internet that:

1. The file is titled **index** (ONLY applies if you are using Dreamweaver or Kompozer)

2. Contains heading text

3. Contains two paragraphs of content

4. Contains at least one graphic that is positioned to the left or the right of the paragraphs

5. Contains at least one link to another site

6. Has a layout that you can use consistently for a multi-page site

7. Has a navigation bar (you will link the other pages in 812)

8. Contains an e-mail link to yourself

9. Contains embed code for the MAET Badge

StAIR: Project Design

Description	10 points

You are to create a brief design presentation of your intended project as if you were seeking funding or release time to complete it. It should be based upon the STAIR_Design_Form.doc file. You will add to the design form a flowchart showing the slides you will create in your PowerPoint presentation and how they are connected. You can do this by using the drawing tools in Word.

For this assignment you have the option of turning in a PowerPoint presentation or a Word doc in which you have completed the StAIR design form.

Content Requirements

The design of your project should address all of the elements in the StAIR design form.

Technical Requirements

An effective PowerPoint presentation, using appropriate features to communicate clearly and professionally your design or a Word document that has effectively addressed all of the elements in the StAIR design form.

StAIR: Project Development

Description	35 points

This stand-alone instructional resource should be completed in PowerPoint based upon the project design in the previous assignment.

Content Requirements

As per your design, the project must:

1. Address a learning need in education as defined in your design

2. Illustrate at least 2 different instructional strategies

3. Require input from the learner, and provide feedback to the learner based on this input

Technical Requirements

1. A PowerPoint in kiosk

2. Includes relevant sounds and images

3. Provides a means for users to navigate in the project and to take action that you respond to

4. Optionally, it may include:

   o   Links to Websites

   o   Links to external documents and applications

   o   Video

StAIR: Major Project Report

Description	15 points

This project report should be in the form of a word processing document (e.g., in Microsoft Word). The intent is to provide an overview of your project, highlighting the pedagogical features of it.

In effect, this document should be your design updated to reflect the work you did, plus an assessment of the effectiveness of your work.

This report should discuss how your project was implemented and the outcomes, both positive and negative.

Content Requirements

1. It describes the learning need in education addressed by your project (linked to the appropriate curriculum standards)

2. It clearly explains, and illustrates with examples from your project, how your project has employed at least 2 different instructional strategies

3. It clearly explains, and illustrates with examples from your project, how your project requires input from the learner and provides feedback to the learner based on this input

4. It provides your own assessment of how effectively your project meets your design goals. Rather than simply saying that your project meets your objectives well, a thoughtful reflection on the strengths and weaknesses of the result of your project is more important. Remember that, in doing this project, it is hoped that you will have learned about projects like this, so a realistic assessment of the effectiveness of the project is much better than stating that the project does what you hoped it would.

Technical Requirements

Demonstrates effective use of word processing features such as text and paragraph formatting, graphics and screen dumps, and web links, to increase the clarity and effectiveness of your material.

Class Participation

Description   20 points

You will receive full credit for class participation if you actively and constructively contribute to class interaction during:

1. Class activities such as evaluating a web-based application and maintaining a blog

2. Participation in discussion forums

3. Group activities, including feedback on StAIR designs of other class members and commenting on their group members blogs

STAND-ALONE INSTRUCTIONAL RESOURCE
DESIGN FORM

Developer: _____

AUDIENCE

Describe the relevant characteristics of the intended learners (e.g., grade level, special needs or advanced).

INSTRUCTIONAL OBJECTIVES

What do you want the learner to learn? (Be sure to reference the subject matter as well as appropriate curriculum standards.)

PEDAGOGY

What are your instructional strategies? (Be sure to design and include at least two different strategies, such as, but not limited to, inductive and deductive.) Briefly describe the flow of interaction for the learner.

ACTIVE RESPONSE

What will you ask the learner to do to demonstrate understanding?

FEEDBACK

How will you give the learner feedback on the actions taken?

PLEASE SEE THE NEXT PAGE FOR INFORMATION ON PLANNING YOUR STAIR.

Planning an interactive, stand-alone instructional resource takes a lot of careful planning. To help you identify what the computer will do based on input from the student you will need to create a flow chart. Basically you are diagramming what cause will result in certain effects. Below is a very simple example of how you can use a flowchart. **Remember you have to say more than "Try again" or" Great Job" in your actual StAIR**. In the flowchart, however, you can just put an abbreviated version. In this example students are presented with a question "How many sides does a square have?". On this slide there will be 4 action buttons for this multiple response question. If they press the action button to select 1, 2, or 3 as their answer they will be directed to a Try again slide. If they select 4 they will be directed to the slide that says Excellent. For more information on creating a flowchart you might want to check out Microsoft's Tutorial.

How Many Sides does a Square Have?

1, 2, or 3

4

Try Again!

Excellent! Click Next to Continue