

I. COURSE DESCRIPTION

This course will examine broad trends in the area of emerging technologies for instruction, as well as specific technologies that support aspects of the teaching and learning process. Learners in the course will develop, or expand an existing information collection and sorting system for staying ahead of technological innovation that might impact education. We will also develop general criteria for assessing the utility of specific technologies.

II. RATIONALE

Technologies that support teaching and learning are being introduced into elementary, secondary, post-secondary, and corporate learning environments at an ever-increasing rate. Educators at all levels are faced with the challenge of understanding how these extensions to existing technologies and innovative new technologies affect the teaching/learning process and how to effectively integrate the new technologies into the instructional environment.

III. COURSE GOALS/OBJECTIVES

The goal is for students to develop a broad understanding of origins, current trends and future possibilities for instructional technologies. Participants that complete all assignments and actively engage in the instructional activities will be able to:

1. Classify emerging technologies into global categories.
2. Identify the theories of learning and/or instruction that support the instructional technology.
3. Identify the strengths and weaknesses of a specific instructional technology.
4. Develop evaluation/assessment instruments for instructional technologies.
5. Specify characteristics of the intended learning environment that are critical factors for successful integration of a new technology.
6. Design an instructional strategy to match a target audience and a specific technology.
7. Evaluate each component of the instructional technology with respect to the instructional design process.
8. Evaluate each component of the instructional technology with respect to concerns and issues related to accessibility and diversity.
9. Develop an information collection system to stay current on trends and issues related to technology in education.

IV. COURSE OUTLINE

Schedule: Given the fact that many students in this course are also working teachers and that the K-12 school year starts during the fifth week of this course, content and contact time will be increased during weeks 1-4 so that students/teachers can meet the terms of their employment. The length of time spent on each topic will vary within the daily schedule.

Week	Topics of Instruction
1	Introduction and Overview of Emerging Technologies Classification schemes, characteristics of instructional technologies. Instructional theories and technological advances Trends worthy of attention Developing an information collection system
2	Learning Environments (virtual reality, museums, Disneyland, virtual textbooks, on-line environments) Tools for the creation of Instruction (print based, web-based, authoring tools, multimedia, self-paced materials) Assessment of Learning (on-line assessment, biometric advances) Selection of an area for research to present during last class.
3	Hardware (PDA's, wireless/virtual classrooms, desktop video) Software (productivity tools for learners and instructors) Communication (email, discussion groups, interactive video, groupware, phone, fax, wireless, networks, distance learning)
4	Learning management (teacher/student interactions, learning paths, CMI) Emerging technology and issues of accessibility and diversity. Presentation of research on instructional products/processes.

V. REQUIRED/OPTIONAL TEXTS

Given that emerging technologies are by definition on the leading edge of the information diffusion/adoption curve, it is necessary that many of the information resources used in the course be from current journal articles and on-line sources. Several texts and articles that define the field will be provided for grounding and several on-line sources of information will be listed as guides to research.

On-line resources for the course are located at:

<http://gozips.uakron.edu/~jsavery/emerging>

Additional On-Line Sources

The Mid-continent Research for Education and Learning:

<http://www.mcrel.org/resources/>

The North Central Regional Technology in Education Consortium:

<http://www.ncrtec.org/>

ERIC New Information & Technology Home Page:
<http://ericir.syr.edu/ithome/edutech.htm>

University of Michigan - Center for Highly Interactive Computing in Education: <http://hice.eecs.umich.edu/>

International Society for Technology in Education: <http://www.iste.org>

Web Reference as a portal to several interesting developments:
<http://www.webreference.com/>

VI. INSTRUCTIONAL STRATEGIES/ACTIVITIES/TECHNOLOGY

Class sessions will begin with instructor presentations but soon be focused on student directed research activities, demonstration, discussion, and lecture. Students will be actively involved in content generation and delivery.

Students will explore a range of technological innovations that are impacting education including but not limited to; the internet/web, personal digital assistants (PDA's), advanced authoring programs, multiple modes of interactive communication (wireless, groupware), interactive learning environments (multimedia enriched), distance learning (including video-enhanced), non-traditional learning environments (museums), and virtual reality environments. Students will develop instructional materials that utilize a selected technology and share their reflections on the instructional technology with their peers at the end of the semester.

Attendance is expected at every class session. Class will begin on time. Students missing class for any reason are expected to obtain notes, instructions, and assignments from the instructor or their peers.

Assignments are due according to the syllabus and course schedule. If a student is unable to attend class on a date when an assignment is due, the student is responsible for ensuring the instructor receives the assignment by the due date. Students may fax assignments, send them to the instructor via email (when appropriate to do so), mail them, or send them to class with another student.

VII. EVALUATION/STUDENT ASSESSMENT

Assessing depth of understanding will involve three assignments:

Assignment #1 - describe where you are now with respect to technologies used in instruction. Develop a **THREE YEAR** plan that starts each Fall and identifies goals for the year. Clearly identify the anticipated end state: What instructional technologies will you and your students be using and how in June 2005?

Assignment #2 - Each student or team of students will select a technology or area of interest, research that topic and present to the class on Aug. 13th or 15th. Sample research presentations are available from the course website.

Assignment #3 - Each student will develop an electronic system for collection, filtering and storing of information on emerging technologies for instruction. The course website provides a list of resources to help you get started. The purpose of this assignment is to begin to develop a structure for collecting information related to teaching and technology. Interpreting and filtering of information will be done by the lens that you use and the sources you select. Written descriptions of the purpose and structure of the information collection and management system you have devised would be appropriate evidence.

VIII. STUDENT ETHICS AND OTHER POLICY INFORMATION

For further information about The University of Akron's policies regarding student ethics and conduct, please consult the following sources: <http://www3.uakron.edu/gradsch/gradbull.html>, then select "General Information" (academic honesty); or www.uakron.edu/studdev/conduct.html (Student Code of Conduct). Any student who feels she/he may need an accommodation based on the impact of a disability please consult www.uakron.edu/access and the Office of Accessibility at (330) 972-7928.

IX. BIBLIOGRAPHY

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