Assistive Technology
EDUC 625
Summer 2007

Instructor:
Office:
Phone:
Email:

Course Description:
EDUC 625 Assistive Technology. (3-0-3) II. This course is designed to introduce the school professional to the use of assistive technologies in schools and how to better understand assistive technology used for students with disabilities. This course will also research the available assistive technologies and their appropriate integration into the classroom.

Course Requirements:
Participants will be required to have access to a computer that meets the Distance Learning Office BlackBoard technical requirements (http://www.morehead-st.edu/units/distance/bbtech.shtml) due to the nature of this web-based course.

Course Text/Materials:
Required:
Rose, D.H., & Meyer, A. (2002). Teaching every student in the digital age: Universal design for learning. Alexandria, VA: Association for Supervision and Curriculum Development. [Online http://www.cast.org/teachingeverystudent/ideas/tes/]

Recommended:
Lazzaro, J. J. (2nd). (2001). Adaptive technologies for learning and work environments. Chicago, IL: American Library Association.

Course Technology Requirements:
3½" Diskettes **are not** an acceptable format to turn in digital projects in this class and cannot be accepted. I recommend that you submit projects on the BlackBoard Digital Drop Box or via email. If necessary, you can also submit assignments on CD-R (CD-burners can be found on any of the black IBM computers in computer labs.), or on a USB jump drive (These can be found at most stores such as Wal-Mart, Target, BestBuy, etc.). If you would like to submit assignments on CD or a jump drive, make arrangements with me in advance to ensure these are received by the due dates.

Instructional/Physical Accommodations:
If you require special accommodations please contact me within the first two weeks of class. You will be asked to provide documentation for any special needs from the Office of Disability Services.

Attendance:

This course is an online course where participants will be active in online learning environments. Participants are expected to contribute to the online activities that occur. All class assignments are due on the date assigned in class. **Unexcused late assignments will not be accepted**.

Plagiarism and Academic Dishonesty:

Due to the nature of this class, it is acceptable to reference web-based materials (i.e. lesson plans, activities, etc.) as a resource for generating ideas, but any materials used regardless of where they are obtained should be cited appropriately (i.e. APA format, MLA format, etc.). **You are not allowed to use or simply modify someone else's work**. You must give the appropriate credit for the works you reference in class. If you are found to be guilty of plagiarism, the guidelines for academic dishonesty in the student handbook will be followed and a consequence of automatic failure of the assignment, exam, or class could occur at the instructor's discretion.

Course Evaluation:

A link to the online course evaluation will be provided on the BlackBoard course website as well as an announcement posted when the course evaluation is requested of course participants.

Grading Criteria:

All submitted work will be evaluated based on the overall design, quality of work, and quality of writing (use of punctuation, grammar, and spelling). Project evaluation documentation will be sent to each student upon grading of the project via the Digital Drop Box located on BlackBoard. Grades will be posted on the BlackBoard gradebook, which is available to each participant.

Electronic Document Format:

All typed documents must be saved as either a Microsoft Word document (i.e. test.doc) or in Rich Text Format (i.e. test.rtf). No other formats for typed documents will be accepted. A tutorial on saving in Rich Text Format is available in the Course Documents section of BlackBoard.

Course Outcomes:

Students will consider two major questions throughout this course:

1. Will technology enable a student to learn a skill or competency when they could not previously?
2. Will technology enable a student to learn the skill or competency better than they could previously?

At the conclusion of this course the student will be able to:

- Choose, use and modify the appropriate technology to accomplish instructional goals and objectives.
- Integrate the appropriate technology into instructional methods.
- Examine and discuss universal design for learning.
- Research, evaluate, and select the appropriate technology based curriculum materials in response to learner needs
- Develop an awareness and appropriate use of adaptive and assistive devices available for persons with disabilities.
- Discuss ethical issues related to the use of assistive technologies.

NCATE themes integrated throughout this course:

Diversity	Candidates within the course will review readings regarding assistive technology and how it can be applied to support the learning of various populations particularly diverse and special needs populations.
Technology	This course focuses on the appropriate integration of assistive technology in the classroom. A variety of technologies designed for specific disabilities will be explored..
Professional Community	The objectives in this course are based on the NCATE/AECT Educational Communications and Instructional Technology Accreditation Standards. Additionally, the participants will interact through the Blackboard discussion board, e-mail, virtual chats, and interviews with special education professionals.
Evaluation	An evaluation plan is described in this syllabus and scoring criteria are provided on each of the projects assigned in class. Quantitative and qualitative feedback are provided to the candidates.
Performance Assessment	A variety of performance assessments are used throughout the class Candidates demonstrate proficiency through the successful completion of special educator interview, assistive technology integration project, and in-class projects.

Course Objectives:

The objectives listed below are consistent with the NCATE/AECT Educational Communications and Instructional Technology (ECIT) Accreditation Standards Performance Indicators. This course also meets the following Kentucky Experienced Teacher (2-Demonstates Knowledge of Content, 3-Designs/Plans Instruction, 4-Creates/Maintains Learning Climate, 5-Implements/Manages Instruction,
6-Assesses and Communicates Learning Results, 7-Reflects/Evaluates Teaching/Learning, and 10-Demonstrates Implementation of Technology.

1.1.a Utilize and implement design principles which specify optimal conditions for learning.
1.1.1.a Write appropriate objectives for specific content and outcome levels.
1.1.1.b Analyze instructional tasks, content, and context.
1.1.2.a Create a plan for a topic of a content area (e.g., a thematic unit, a text chapter, an interdisciplinary unit) to demonstrate application of the principles of macro-level design.
1.1.2.b Create instructional plans (micro-level design) that address the needs of all learners, including appropriate accommodations for learners with special needs.
1.1.2.d Incorporate contemporary instructional technology processes in the development of interactive lessons that promote student learning.
1.1.3.a Produce instructional materials which require the use of multiple media (e.g., computers, video, projection).
1.1.4.a Use instructional plans and materials which they have produced in contextualized instructional settings (e.g., practica, field experiences, training) that address the needs of all learners, including appropriate accommodations for learners with special needs.
1.1.5.a Utilize a variety of assessment measures to determine the adequacy of learning and instruction.
1.2.a Apply principles of educational psychology, communication theory, and visual literacy to the selection of media for macro- and micro-level design of instruction.
2.0.1 Select appropriate media to produce effective learning environments using technology resources.
2.0.7 Contribute to a professional portfolio by developing and selecting a variety of productions for inclusion in the portfolio.
2.1.3 Use presentation application software to produce presentations and supplementary materials for instructional and professional purposes.
2.2.1 Apply principles of visual and media literacy for the development and production of instructional and professional materials and products.
2.3.4 Incorporate the se of the Internet, library online catalogs and electronic databases to meet the reference and learning needs of students and teachers.
2.4.3 Combine electronic and non-electronic media to produce instructional materials, presentations, and products.

2.4.8 Prepare instructional materials, bibliographies, resource lists for instructional units, and other materials as appropriate to support students and teachers.
3.1.1 Identify key factors in selecting and using technologies appropriate for learning situations specified in the instructional design process.
3.1.2 Use educational communications and instructional technology (ECIT) resources in a variety of learning contexts.
3.3.1 Use appropriate instructional materials and strategies in various learning contexts.
3.3.2 Identify and apply techniques for integrating ECIT innovations in various learning contexts.
5.1.1 Identify and apply problem analysis skills in appropriate educational communications and instructional technology (ECIT) contexts (e.g., conduct needs assessments, identify and define problems, identify constraints, identify resources, define learner characteristics, define goals and objectives in instructional systems design, media development and utilization, program management, and evaluation.

Course Schedule:

Week	Topic	Assignment
1 (June 4–10)	**Understanding Universal Design of Learning**	Online notes/lecture materials
	Education in the digital age Foundations for Assistive Technology	Rose Text: Chapter 1 (*Opt:* Lazzaro Text: Chapter 8)
	The what, how, and why of learning The networks of the brain	Rose Text: Chapter 2
	What is universal design? Learning how to learn	Rose Text: Chapter 4
	Technology for persons with visual impairment	*Activity:* identify assistive technologies, instructional app's (Opt: Lazzaro Text: Chapter 3) *Reading Discussions:* See BlackBoard Discussions
2 (June 11–17)	**The framework and value of universal design learning: Building flexibility into your curriculum, instruction, and materials**	Online notes/lecture materials
	Establishing clear goals for student learning; How can the Internet and Intranet work for you	Rose Text: Chapter 5 (*Opt:* Lazzaro Text: Chapter 9)
	Designing instruction to support recognition, strategic and affective learning	Rose Text: Chapter 6
	Traditional Media vs. Flexible Media Understanding Learner Needs	Rose Text: Chapter 3
	Technology for persons who are deaf or hard of hearing	*Activity:* identify assistive technologies, instructional app's (*Opt:* Lazzaro Text: Chapter 4)

		Reading Discussions: See BlackBoard Discussions
3 (June 18–24)	**Identifying and Removing Levels of Barriers: UDL in assessment, environment, and system design**	Online notes/lecture materials
	Barriers to accurate assessment Addressing academic assessment flaws	Rose Text: Chapter 7
	Creating accurate, ongoing assessment through UDL Developing assessments through UDL	
	Environmental barriers to learning: identification and solutions	
	System-level barriers and solutions: policy, technology, training, parental involvement and more	(*Opt:* Lazzaro Text: Chapter 8)
	Understanding policy, training, and parent involvement	
	Technology for persons with learning disabilities	*Activity:* identify assistive technologies, instructional app's (*Opt:* Lazzaro Text: Chapter 7) *Reading Discussions:* See BlackBoard Discussions
4 (June 25–29)	**Technologies and Solutions to Meet Learner Needs**	Online notes/lecture materials
	From theory to practice: Making UDL work in your schools Funding an adaptive technology program	Rose Text: Chapter 8 (*Opt:* Lazzaro Text: Chapter 10)
	Technology for persons with motor disabilities	*Activity:* identify assistive technologies, instructional app's (*Opt:* Lazzaro Text: Chapters 5 and 6) *Discussions:* Project Presentations
	Technology for persons with speech disabilities	
	Final Project Presentations	Post by June 27, 9 a.m. (EST) *Final Discussion:* see BlackBoard Discussions

Assignments:

Technology Integration Project & Presentation

Throughout the course, you will conduct an assistive technology assessment of your school and, based on the results of that assessment and the content of this course, transform a current curricular-based classroom unit into a unit that meets the UDL theories and practices addressed throughout this course. You will incorporate the use of technology into this project and present it to the class.

Your project will be based on sound theory and student needs. You should explain your curricular decisions and technology choices in your presentation. Your unit should include at least the following:

- Preparation of lessons that use technology applications as a tool to teach
- Consideration of universal design and inclusion for learning when creating lessons and assessments
- Selection and adaptation of technology according to learner needs and characteristics
- Consideration of technology to assist in the planning and management of the teaching and learning environment
- Integration of activities that promote and encourage thinking, problem-solving, and other cognitive strategies to meet individual needs
- Completion of a unit portfolio that includes the lessons, instructional strategies, and a presentation that teaches a concept related to the unit (an example of a UDL lesson).
- Finally, include a recommendation on what could be done in your school to support more universal design (changes in policies, acquisition of equipment, changes to environmental factors, etc.)

You will be graded in two parts on this assignment. First, you will be graded on the completion of the assistive technology assessment and write-up of your technology integration plan. Second, you will be graded on the actual presentation of your plan to the rest of the class and resulting interactions with fellow students on their plan presentations.

You may choose any format for your presentation – a paper, a PowerPoint presentation (please follow good design guidelines), a narration, a video, or any other format that best allows you to demonstrate your learning and application (again, it must include the content above).

If you are not currently in a school / learning environment:

Conduct an assistive technology assessment of the university. What services, technologies, etc., are available through Morehead State? Using the results of that assessment, select a course (online or in-class) you have taken in the past that could have been improved using universal design principles and describe how the course can be improved making better use of existing resources at the university.

Your project will be based on sound theory and student needs. You should explain your recommendations and technology choices in your presentation. Your unit should include at least the following:

- Preparation of instruction that uses technology applications as a tool to teach
- Consideration of universal design and inclusion for learning when creating instruction and assessments
- Selection and adaptation of technology according to learner needs and characteristics
- Consideration of technology to assist in the planning and management of the teaching and learning environment
- Integration of activities that promote and encourage thinking, problem-solving, and other cognitive strategies to meet individual needs
- Completion of a final project that includes content, instructional strategies, and a presentation that teaches a concept related to the content (an example of a UDL lesson).
- Finally, include a recommendation on what could be done in the university to support more universal design in learning (changes in policies, acquisition of equipment, changes to environmental factors, etc.)

Weekly Activity: Identifying and Applying Assistive Technologies

Each week, in addition to the readings, you will work as a group to research different adapative/assistive technologies for learners with different disabilities. What you find in your search should be summarized in the class "wiki" – an online shared working space where you each can add, edit, etc., without having to email a document around. You may use resources such as web searches, the Lazzaro text, and the results of your own assistive technology assessment.

When you post a technology, list the name of the technology, your name in parentheses (to track who is adding and who is not), a brief description of the technology, a brief (one paragraph) discussion on how it is or can be used to enhance learning, and information on where to obtain the technology or any additional information someone interested in using it may want to make purchasing/acquisition decisions.

For this activity, you are essentially working as a group to build a resources list over the length of this course.

Weekly Discussions:

In addition to the readings and activity, we will have weekly discussions via the discussion board. Each week, I will post two questions based on the readings for you to consider and respond to. You should provide full, thoughtful responses to each question (the equivalent of a 1-page response). In addition, you will be expected to read each others' posts and respond to those in a thoughtful manner. The purpose is to develop a dialogue of ideas and solutions – so dialogue. Your participation grade will be based on both your response to my question and your level of interaction with other students in the class.

Grading:

Assignment	Point Value
Technology Integration Project	75
Project Presentation	25
Weekly Activities	10 pts each (50 total pts)
Weekly Discussions (Participation)	10 pts / week (30 total pts for Weeks 1-3)
Total Points Possible	**180 points**

162 - 180 = A
144 - 161 = B
126 - 143 = C
Below 126 = E

References:

Accreditation Standards for Programs in Educational Communications and Instructional Technology (ECIT). (2001). 2004, from www.aect-members.org/standards

Lazzaro, J. J. (2001). *Adaptive technologies for learning and work environments*. Chicago, IL: American Library Association.

National Educational Technology Standards for Teachers Preparing Teachers to Use Technology. (2002).). Eugene, OR: International Society for Technology in Education.

Rose, D. H., & Meyer, A. (2002). Teaching every student in the digital age: Universal design for learning. 2005, from http://www.cast.org/teacheverystudent/ideas/tes