

Application for State Approval of Teacher Preparation Specialty Programs

Michigan Department of Education, Office of Professional Preparation Services
P.O. Box 30008, Lansing, Michigan 48909
Phone: (517) 335-4610 * Fax: (517) 373-0542**

Directions:

- For each new, amended, or experimental program, a separate application is required.
- Application and all documentation are to be submitted electronically.
- Fax or mail only the cover page that is signed by the unit head.
- All correspondence regarding this application should be addressed to the consultant/coordinator identified on Application Attachment 1.

I. Application Information	
Institution	Central Michigan University
MDE Endorsement Area and Code (from Application Attachment 2)	NP Educational Technology
Date of this Application	February 15, 2005
Name and Title of Unit Head	Dr. Karen Adams, Dean
Signature of Unit Head	

II. Contact Information for Questions Related to This Application	
Contact Person's Name and Title	Tim Brannan
Contact Person's Phone Number	(989) 774 – 2584
Contact Person's Fax Number	(989) 774 – 3152
Contact Person's E-Mail Address	tim.brannan@cmich.edu

III. Type of Request for Approval	(Indicate One)
New program for institution	Yes
U.S. Department of Education Classification of Instructional Programs (CIP) Code, if vocational occupational area	
Compliance with State Board of Education new or modified program criteria	
Experimental program	
Program amendment (See Section IX for guidelines)	

IV. Institutional Representatives

Please list individuals available to serve on Michigan Department of Education Ad-Hoc Committees Related to this Specialty Program (e.g., program review, standards development, test development, forum planning). Include both higher education faculty and K-12 representatives.

Name/Title	Specialty	Mailing Address	E-Mail Address	Phone	Fax
Dr. Tim Brannan, Assistant Professor	Educational Technology	Central Michigan University Ronan Hall Rm 326 Mt. Pleasant, MI 48858.	tim.brannan@cmich.edu	(989) 774 - 2584	(989) 774 - 3152

V. Program Information

Program Summary	<p>The Educational Technology Endorsement (NP), will be offered as an additional benefit of the new Graduate Certificate in Educational Technology offered at Central Michigan University. Once students complete the required courses and one elective they will be eligible for the endorsement. In addition, this endorsement will help prepare teachers in meeting the new 7th standard for professional preparation – Education Technology. The Graduate Certificate in Educational Technology program prepares students to provide instruction utilizing new learning technologies. The technologies addressed in this program include multimedia, uses of educational technologies, and telecommunications in education. Designed to meet the needs of the classroom teacher, this program also prepares individuals for technology leadership roles. The certificate program requires a minimum of 15 credit hours of required core courses that will be offered online, internationally and on campus and a capstone project completed in conjunction with EDU 643. Capstone educational technology projects must demonstrate effective uses/integration of technology in K-12 classroom settings. Once completed, students will be able to “seamlessly” transition into the Masters of Arts Degree in Educational Technology.</p> <p>Required Courses (Total of 15 hours) EDU 590 (3) Technology in Education EDU 595 (3) Telecommunications in Education EDU 642 (3) Instructional Multimedia EDU 643 (3) Instructional Design</p>
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	<p>EDU 707 (3) Issues in Educational Technology</p> <p>Elective Courses (Total of 3 hours)</p> <p>EDU 708 (3) Distance Education EDU 709 (3) Innovative Uses of Technology</p>
Program Coursework	<p>Complete Application Attachment 3 showing the required and elective courses for this program. This list should include the following information.</p> <ul style="list-style-type: none"> • Contact person for specialty program. • Course title and number. • Number of semester hours for required and elective courses. • Designation for elementary, secondary, or K-12 certification. • Course descriptions. <p>Please refer to the Quick Reference Chart at http://www.michigan.gov/documents/MinimumRequiredHoursSpecialty-AreaProgramA21931_74344_7.PDF for available program options and required semester hour minimums.</p>

VI. Content Guidelines/Standards Matrix

Complete the Content Guidelines/Standards Matrix (a sample format is provided in Application Attachment 2); appropriate program standards must be selected for each program:

- Standards approved by the Michigan State Board of Education (SBE) can be found in matrix format at http://www.michigan.gov/mde/0,1607,7-140-5234_5683_6368-24835--,00.html
- A list of standards to use for each specialty program can be found at http://w3.michigan.gov/documents/Standards_to_use_for_Approval_of_Each_Specialty_Program_11_109415_7.04C44693_A74354.doc

VII. Supporting Documentation

Field Experiences	<ul style="list-style-type: none"> • There is no requirement for student teaching as this is an additional endorsement at the graduate level for previously certified teachers.
Instructional Methods	<ul style="list-style-type: none"> • Not Applicable. Participants are taught how to integrate technology in their classroom settings.
Course Descriptions	<ul style="list-style-type: none"> • Provide descriptions of all courses contained on Application Attachment 3. Descriptions must provide enough information to show that standards could logically be met in these courses.
Syllabi	<ul style="list-style-type: none"> • See attached.
Faculty	<ul style="list-style-type: none"> • See attached
Technology	<ul style="list-style-type: none"> • Each of the courses listed have an online component available in CMU's Blackboard Course Management System.
Vocational Experience	Not applicable.

VIII. Experimental Program Description (Rule 53)

Program Purpose	<p>The Educational Technology Endorsement (NP) will be offered as an additional benefit of the new Graduate Certificate in Educational Technology offered at Central Michigan University. Once students complete the required courses and one elective they will be eligible for the endorsement. In addition, this endorsement will help prepare teachers in meeting the new 7th standard for professional preparation – Education Technology. The Graduate Certificate in Educational Technology program prepares students to provide instruction utilizing new learning technologies and although approval of the educational technology certificate as a professional preparation program leading to an endorsement is new, Central Michigan University has offered a Masters Degree in Education Technology for over 10 years and serves over 50 students each year. The newly created Graduate Certificate in Educational Technology was developed as a 15 credit certificate program for those educators needing advanced coursework in technology integration, but not intending to pursue a complete Masters degree.</p> <p>The need for credit and non-credit programs to prepare in-service teachers in technology integration in classroom curriculum is documented in numerous national and state reports. By Michigan Department of Education adopting the 7th standard for professional preparation, in-service teachers need a mechanism to ensure compliance with this standard. Central Michigan University anticipates the level of enrollment for the new Graduate Certificate in Education Technology and the new endorsement is expected to grow from 30-40 students per year. Within three - years, the program will grow to approximately 75-100 students per year in the courses leading to the graduate certificate and endorsement. This increase will be achieved as the entire graduate certificate and endorsement option will be offered in alternative formats, online/hybrid, for those teachers who are not currently able to attend Central Michigan University or other universities because they do not have access to a higher education institution where they teach and live.</p>
Program Design	<ul style="list-style-type: none">To receive the Educational Technology Endorsement (NP), teachers need to take the following courses: <u>Required Courses (Total of 15 hours)</u> EDU 590 (3) Technology in Education EDU 595 (3) Telecommunications in Education EDU 642 (3) Instructional Multimedia EDU 643 (3) Instructional Design EDU 707 (3) Issues in Educational Technology <u>Elective Courses (Total of 3 hours)</u> EDU 708 (3) Distance Education EDU 709 (3) Innovative Uses of TechnologyThis endorsement program will be evaluated annually during the program review process required by Central Michigan University for the Masters in Educational

	Technology and Certificate in Educational Technology programs.
Program Duration	Since this endorsement will coincide with the current Masters in Educational Technology and the new graduate Certificate in Educational Technology program, Central Michigan University is requesting an initial endorsement approval of 5 years.

IX. Guidelines for Applying for Amendments to Currently Approved Teacher Preparation	
<p>If the amendment is very minor (e.g., change in a course number(s), change in course sequence, minor modification to a course, etc.) and does not affect how the program standards are met, the amendment may be described in a letter to the Office of Professional Preparation Services. Minor amendments do not require official State approval and are filed with program documentation previously submitted. If the proposed amendment is not clear, or if more information is needed, the institution will be contacted by the Office of Professional Preparation. Once approved, the description of the amendment will be attached to the program application that is currently on file.</p> <p>If the amendment is more extensive, or is submitted in response to new state standards, a complete “Application to Request State Board of Education Approval for Professional Preparation Programs” should be submitted to the Office of Professional Preparation Services. (Institutions may copy, for inclusion in the new application, any sections of the previously approved application that have not been affected by the amendment.)</p>	

Summary of Course Requirements for Specialty Program

Institution: Central Michigan University Date: 12/07/04

Specialty Program: Educational Technology

Program Standards: _____ Standards Date: _____

Program Contact Person(s): Tim Brannan

DIRECTIONS: On the matrix below, list the required courses for this specialty program. Also, indicate the number of electives and any special considerations that apply. In addition to listing the course title, course number, and course semester hours, please indicate whether the course is required for the secondary major or minor, elementary major or minor, the K-12 major or minor, and/or an endorsement.

Course Title	Course Number	* Sem. Hours	Secondary		Elementary		K-12		Additional Endorsements
			Maj.	Min.	Maj.	Min.	Maj.	Min.	
Microcomputers in Classroom Instruction	EDU 590	3							3
Telecommunication in Education	EDU 595	3							3
Instructional Multimedia	EDU 642	3							3
Instructional Design	EDU 643	3							3
Seminar: Issues in Educational Technology	EDU 707	3							3
Distance Education	EDU 708	3							3
Innovative Uses of Technology	EDU 709	3							3
Total number of SEMESTER HOURS <u>required</u> for each option offered: *If the institution assigns a different type of credit, please convert to semester hours.		18							18

(1) Provide descriptions of all courses contained on the above listing. Descriptions must provide enough information to show that standards could logically be met in these courses.

Content Guidelines/Standards Matrix

College/University Central Michigan University **Code:** NP

Source of Guidelines/Standards Michigan State Board of Education, June 2002 **Program/Subject Area** Educational Technology

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
	<p><u>Note:</u> A minimum of 18 semester hours is required for additional endorsement in educational technology.</p>	<p>Central Michigan University's Teacher Education Program has long sought to meet the state and national standards regarding technology and with the advent of this program and others we ensure technology competent teachers.</p> <p>The Educational Technology Endorsement (NP) will be offered as an additional benefit of the new Graduate Certificate in Educational Technology offered at Central Michigan University. Once students complete the required courses and one elective they will be eligible for the endorsement. In addition, this endorsement will help prepare teachers in meeting the new 7th standard for professional preparation – Education Technology.</p>

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
1.0	<p>Foundations Professional studies culminating in the educational technology endorsement prepare candidates to use computers and related information technologies in educational settings in an exemplary way in alignment with the “Seventh Standard” of the Entry-Level Standards for Michigan Teachers. All candidates seeking this endorsement would have opportunities to meet these educational technology foundation standards and to surpass the basic requirements of the “Seventh Standard.”</p>	<p>This program meets the “Seventh Standard” by engaging students in information technology and its uses within the classroom.</p>
1.1	<p>Educational Technology Operations and Concepts Teachers demonstrate a sound understanding of educational technology operations and concepts.</p>	
Performance Indicators – Candidates Will:		
1.1.1	<p>demonstrate at least introductory knowledge, skills, and understanding of concepts related to learning and educational technology as required by the ISTE National Educational Technology Standards for Students (and reflected in the Michigan Curriculum Framework).</p>	<p>This is the primary focal point of EDU 590, in reinforcing Educational Technology concepts and their appropriate use in the classroom.</p> <p>EDU 590 “Advanced Technology in Education”, Assessments 5, 6, 7, Topics 1, 2, 3, 6</p>
1.1.2	<p>demonstrate continual growth in educational technology knowledge and skills to stay abreast of current and emerging technologies.</p>	<p>Throughout all the purposed certification courses, students operate current educational technologies and learn through research/assessments new and innovative technologies.</p> <p>EDU 590 “Advanced Technology in Education”, Assessments 1, 2, Topics 6, 16, 17, 19</p>

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
1.2	<p>Planning and Designing Learning Environments and Experiences Candidates plan and design effective learning environments and experiences supported by educational technology.</p>	
Performance Indicators - Candidates Will:		
1.2.1	design developmentally appropriate learning opportunities that apply educational technology-enhanced instructional strategies to support the diverse needs of learners.	<p>Students are instructed on using adaptive technologies to meet diverse learning styles.</p> <p>EDU 590 “Advanced Technology in Education”, Assessments 2, 6, Topics 3, 6, 15</p> <p>EDU 643 “Instructional Design”, Weeks 6, 14</p>
1.2.2	apply current research on teaching and learning with educational technology when planning learning environments and experiences.	<p>All courses challenge students to update their knowledge of teaching theories and concepts and apply them in their lesson plans.</p> <p>EDU 643 “Instructional Design”, Weeks 1, 2, 9</p> <p>EDU 707 “Issues in Educational Technology” Topic 3, Outline III, IV</p>
1.2.3	identify and locate educational technology resources and evaluate them for accuracy and suitability.	<p>Students learn to research and evaluate technologies through lesson plan activities and assessments.</p> <p>EDU 590 “Advanced Technology in Education”, Assessments 2, 4, Topics 5, 6</p>

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
1.2.4	plan for the management of educational technology resources within the context of learning activities.	<p>Students engage in resource management in all courses. They are presented with the of concept diversifying equipment use , multiple configurations, and adapting technology to future student needs.</p> <p>EDU 590 “Advanced Technology in Education”, Topic 3</p> <p>EDU 643 “Instructional Design”, Weeks 11, 12</p>
1.2.5	plan strategies to manage student learning in an educational technology-enhanced environment.	<p>This topic is solidified throughout all courses in the development and progression of lesson plan building using educational theories and new technologies.</p> <p>EDU 590 “Advanced Technology in Education”, Topics 3, 16</p> <p>EDU 643 “Instructional Design”, Weeks 3, 4, 5, 6, 10</p> <p>EDU 707 “Issues in Educational Technology” Topic 3, Outline III, IV</p>
1.3	<p>Teaching, Learning, and the Curriculum In alignment with the Michigan Curriculum Framework, candidates implement curriculum plans that include methods and strategies for applying educational technology to maximize student learning.</p>	
Performance Indicators - Candidates Will:		
1.3.1	use, and foster the use of, educational technology-enhanced experiences to address state content and technology standards set forth in the Michigan Curriculum Framework.	<p>EDU 643 focuses on the alignment of lessons to content standards. All lesson applications require consideration of the Michigan Curriculum Framework.</p> <p>EDU 643 “Instructional Design”, Weeks 1, 2</p>

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
1.3.2	apply educational technology to develop students' higher order skills and creativity, including critical thinking and the learning skills set forth in the Michigan Curriculum Framework.	EDU 643 focuses on the alignment of lessons to content standards. All lesson applications require consideration of the Michigan Curriculum Framework. EDU 643 "Instructional Design", Weeks 3, 4, 5, 6, 7, 8
1.3.4	use educational technology to support learner-centered strategies that address the diverse needs of students, including addressing the individual needs of each student, and fostering collaborative, holistic, and self-directed learning.	EDU 643 "Instructional Design", Weeks 6, 13, 14
1.3.5	manage student-learning activities in an educational technology-enhanced environment.	EDU 643 builds on students' abilities to manage learning activities. Other courses build on that experience or provide a venue for self-assessment. EDU 643 "Instructional Design", Weeks All
1.4	Assessment and Evaluation Candidates apply educational technology to facilitate a variety of effective assessment and evaluation strategies.	
Performance Indicators - Candidates Will:		
1.4.1	apply educational technology in assessing student learning of subject matter using a variety of assessment techniques, including focusing on the assessment of each student.	EDU 643 "Instructional Design", Weeks 7, 13
1.4.2	use educational technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning, including focusing on the assessment of each student.	EDU 707 "Issues in Educational Technology" Topics 2, 3, 4, Outline III, IV, V

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
1.4.3	apply multiple methods of evaluation to determine students' appropriate use of educational technology resources for learning, communication, and productivity, including focusing on the assessment of each student.	EDU 590 "Advanced Technology in Education", Topic 12
1.5	Productivity and Professional Practice Candidates use educational technology to enhance their productivity and professional practice.	
Performance Indicators - Candidates Will:		
1.5.1	use educational technology resources to engage in ongoing professional development and lifelong learning.	Students are required to constantly assess technologies and incorporate those technologies into their knowledge base, using them in other courses. EDU 590 "Advanced Technology in Education", Assessments 1, 5, Topics 4, 5
1.5.2	continually evaluate and reflect on professional practice to make informed decisions regarding the use of educational technology in support of student learning.	EDU 643 "Instructional Design", Weeks 1, 2, 8 EDU 707 "Issues in Educational Technology" Topics 2, 3, Outline II, III, IV
1.5.3	apply educational technology to increase productivity.	All courses require the use of technology and showing student the significance of such use in the classroom environment.
1.5.4	use educational technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.	This is one of the primary goals of EDU 595. Showing students various ways for mass communication for instructor collaboration and continued learning. EDU 595 "Telecommunication in Education", Evaluations 1, 2

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
1.5.5	use educational technology to collaborate with other teachers and foster collaboration among other teachers, schools, and districts to share best practices in alignment with the State Board of Education's Policy Framework on Virtual Schools.	EDU 595 "Telecommunication in Education", Evaluations 1, 4, 5, 6, 7
1.6	<p>Social, Ethical, Legal, and Human Issues Candidates understand the social, ethical, legal, and human issues surrounding the use of educational technology in K-12 schools and apply those principles in practice.</p>	
Performance Indicators - Candidates Will:		
1.6.1	model and teach legal and ethical practice related to educational technology use.	<p>Ethical practices and legal issues are presented in all courses either as full assessments or class discussions.</p> <p>EDU 590 "Advanced Technology in Education", Assessment 5, Topics 10, 14</p> <p>EDU 643 "Instructional Design", Weeks 1, 2</p> <p>EDU 707 "Issues in Educational Technology" Topic 5, Outline VI</p>
1.6.2	apply educational technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.	EDU 707 "Issues in Educational Technology" Topics 2, 3, Outline III, IV
1.6.3	identify and use educational technology resources that affirm diversity.	<p>EDU 590 "Advanced Technology in Education", Topics 14, 15, 16, 19</p> <p>EDU 643 "Instructional Design", Week 2</p>

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
1.6.4	promote safe and healthy use of educational technology resources.	<p>EDU 590 “Advanced Technology in Education”, Assessment 5, Topic 10</p> <p>EDU 643 “Instructional Design”, Weeks 1, 2</p> <p>EDU 707 “Issues in Educational Technology” Topic 5, Outline VI</p>
1.6.5	facilitate equitable access to educational technology resources for all students.	EDU 707 “Issues in Educational Technology” Topic 5, Outline VI, VII
2.0	<p>Specialty Content Preparation for Educational Computing and Educational Technology</p> <p>Professional studies in educational computing and educational technology prepare candidates to exhibit leadership in the identification, selection, and management of hardware and software and the uses of computers and related technologies appropriate to the candidate's teaching field(s).</p>	
2.1	<p>Social, Ethical, and Human Issues</p> <p>Candidates will apply concepts and skills in making decisions concerning social, ethical, and human issues related to computing and educational technology.</p>	Students learn to challenge themselves and understand underlying Social, Ethical, and Human issues in every course. Topics are covered conceptually in discussions as appropriate.
Performance Indicators - Candidates Will:		

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.1.1	describe the historical development and important trends affecting the evolution of educational technology and its probable future roles in society.	<p>All courses build on the overall history and effectiveness of technology in education. Students see how the classroom environment has grown and changed over the years.</p> <p>EDU 590 “Advanced Technology in Education”, Assessment 1, Topics 1, 2</p> <p>EDU 643 “Instructional Design”, Weeks 1, 2</p>
2.1.2	describe strategies for facilitating consideration of ethical, legal, and human issues involving school purchasing and policy decisions.	<p>Students are taught to look at the ethical, legal, and human aspects of any activity, lesson plan, or technology that will affect a classroom in some way.</p> <p>EDU 590 “Advanced Technology in Education”, Assessment 5, Topics 3, 10</p> <p>EDU 707 “Issues in Educational Technology” Topic 5, Outline VI</p>
2.2	<p>Productivity Tools</p> <p>Candidates integrate advanced features of educational technology-based productivity tools to support instruction.</p>	
Performance Indicators - Candidates Will:		
2.2.1	use advanced features of word processing, desktop publishing, graphics programs, and utilities to develop professional products.	EDU 590 “Advanced Technology in Education”, Topic 9 - Microsoft Office
2.2.2	use spreadsheets for analyzing, organizing, and displaying numeric data graphically.	EDU 590 “Advanced Technology in Education”, Assessment 1, Topic 8

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.2.3	design and manipulate databases and generate customized reports.	EDU 590 "Advanced Technology in Education", Assessment 1, Topic 8
2.2.4	use teacher utility and classroom management tools to design solutions for a specific purpose.	EDU 643 "Instructional Design", Weeks 1, 2
2.2.5	identify, select, and integrate video and digital images in varying formats for use in presentations, publications, and/or other products.	EDU 590 "Advanced Technology in Education", Assessments 1, 3, 7, Topics 11, 12 EDU 642 "Instructional Multimedia", Topics All EDU 643 "Instructional Design", Weeks 11, 12
2.2.6	create multimedia presentations using advanced features of a presentation tool and deliver them using computer projection systems.	EDU 590 "Advanced Technology in Education", Assessments 1, 3, 7 EDU 642 "Instructional Multimedia", Topics All EDU 643 "Instructional Design", Weeks 11, 12
2.2.7	apply specific-purpose electronic devices (such as a graphing calculator, language translator, scientific probe ware, or electronic thesaurus) in appropriate content areas.	EDU 590 "Advanced Technology in Education", Topic 9 and 10
2.2.8	use features of applications that integrate word processing, database, spreadsheet, communication, and other tools.	EDU 590 "Advanced Technology in Education", Assessment 1, Topic 8 and 9
2.3	Telecommunications and Information Access Candidates will use telecommunications and information access resources to support instruction.	
Performance Indicators - Candidates Will:		

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.3.1	access and use telecommunications tools and resources for information sharing, remote information access and retrieval, and multimedia/hypermedia publishing.	EDU 595 "Telecommunication in Education", Evaluations 1, 2, 3, 4, 5
2.3.2	use electronic mail and web browser applications for communications and for research to support instruction.	All courses require students to communicate with e-mail and conduct research on the world wide web fro the purposes of the course. EDU 590 "Advanced Technology in Education", Assessment 2, Topics 4, 5
2.3.3	use automated on-line search tools and intelligent agents to identify and index desired information resources.	EDU 590 "Advanced Technology in Education", Assessment 2, Topics 4, 5
2.3.4	identify and use information access and telecommunication tools to support research and instruction throughout the curriculum.	EDU 595 "Telecommunication in Education", Evaluations 1, 2, 3
2.3.5	use local mass storage devices and media to store and retrieve information and resources.	All courses require some form of portable storage and to use existing systems' local storage for researching and evaluating content EDU 590 "Advanced Technology in Education", Assessments 1, 3
2.4	<p>Software/Hardware Selection</p> <p>Candidates will demonstrate knowledge of selection and management of the educational technology infrastructure in a classroom setting. Candidates will identify and implement software in classroom environments. They will investigate issues related to educational technology integration.</p>	
Performance Indicators - Candidates Will:		

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.4.1	develop plans to configure computer/ educational technology systems and related peripherals appropriate to the candidate's teaching field(s) in laboratory, classroom cluster, and other instructional arrangements.	EDU 643 "Instructional Design", Week 2
2.4.2	research, evaluate, and develop recommendations for purchasing instructional software to support and enhance the school curriculum.	EDU 643 "Instructional Design", Week 2
2.4.3	research, evaluate, and develop recommendations for purchasing educational technology systems.	EDU 643 "Instructional Design", Week 2
2.4.4	design and recommend procedures for the organization, management, and security of hardware and software.	EDU 643 "Instructional Design", Week 4 & 5
2.4.5	identify and describe network software packages used to operate a computer network system.	EDU 590 "Advanced Technology in Education", Topic 10
2.4.6	configure a computer system and one or more software packages.	EDU 590 "Advanced Technology in Education", Topic 7
2.4.7	identify and describe software used in classroom settings, including productivity tools, information access/telecommunications tools, multimedia/ hypermedia tools, evaluation/portfolio tools, and computer-based instruction.	EDU 595 "Telecommunication in Education", Evaluations 1, 2, 3, 4, 5 EDU 590 "Advanced Technology in Education", Assessments 1, 2, 6, Topics 6, 7, 8, 12
2.4.8	describe evaluation criteria for software and identify reliable sources of software evaluations.	EDU 590 "Advanced Technology in Education", Assessments 1, 2, Topics 4, 6
2.4.9	identify and classify adaptive assistive hardware and software for students and teachers with special needs and locate sources to assist in procurement and implementation.	EDU 590 "Advanced Technology in Education", Assessment 6, Topic 19

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.5	<p>Research and Theories Candidates will identify and apply educational and educational technology-related research, the psychology of learning, and instructional design principles in guiding use of computers and educational technology in education.</p>	
Performance Indicators - Candidates Will:		
2.5.1	summarize and apply principles and practices of educational research in educational technology.	EDU 707 "Issues in Educational Technology" Topic 2, Outline II
2.5.2	summarize major research findings and trends related to the use of educational technology in education to support integration of educational technology in a K-12 environment.	EDU 707 "Issues in Educational Technology" Topic 2, Outline II
2.5.3	apply theories of learning, teaching, and instructional design and their relationship to meaningful and appropriate ways of using educational technology in instruction.	EDU 707 "Issues in Educational Technology" Topics 2, 3, Outline II, III, IV
2.5.4	describe social and historical foundations of education and how they relate to the use of educational technology in schools.	EDU 590 "Advanced Technology in Education", Topic 1 and 2
2.5.5	identify research related to human and equity issues concerning the use of computers and related technologies in education.	EDU 707 "Issues in Educational Technology" Topic 5, Outline VI
2.5.6	conduct research and evaluate on-line sources of information that support and enhance the curriculum.	EDU 590 "Advanced Technology in Education", Assessment 2, Topics 4, 5

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.5.7	design a research project that includes evaluating the use of a specific educational technology in a K-12 environment.	EDU 707 "Issues in Educational Technology" Topic 4, Outline VII
2.6	<p>Problem Solving, Instructional Design, and Product Development</p> <p>Candidates will use computers and other technologies in research, problem solving, and product development. Candidates use a variety of media, presentation, and authoring packages; plan and participate in team and collaborative projects that require critical analysis and evaluation; and present products developed. Candidates will evaluate authoring and programming environments for use in the classroom. They will apply instructional design principles to develop, implement, and test interactive multimedia instructional products using authoring environments.</p>	
Performance Indicators - Candidates Will:		
2.6.1	identify basic principles of instructional design associated with the development of multimedia and hypermedia learning materials.	EDU 642 "Instructional Multimedia", Topics 5, 10, 15
2.6.2	develop simple hypermedia and multimedia products that apply basic instructional design principles.	EDU 642 "Instructional Multimedia", Topics 1, 4, 9
2.6.3	select appropriate tools for communicating concepts, conducting research, and solving problems for an intended audience and purpose.	<p>EDU 590 "Advanced Technology in Education", Assessment 6, Topics 14, 15, 16</p> <p>EDU 642 "Instructional Multimedia", Topic 5</p> <p>EDU 643 "Instructional Design", Weeks 3, 13</p>

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.6.4	participate in collaborative projects and team activities.	EDU 707 "Issues in Educational Technology" Topic 4, Outline VII
2.6.5	identify examples of emerging, authoring, or problem solving environments.	EDU 642 "Instructional Multimedia", Topic 12 EDU 707 "Issues in Educational Technology" Topic 2
2.6.6	collaborate in on-line workgroups to build bodies of knowledge around specific topics.	EDU 595 "Telecommunication in Education", Evaluations 1, 4, 6
2.6.7	use a computer projection device to support and deliver oral presentations.	All courses build on students abilities to instruct through the use of educational technology. EDU 590 "Advanced Technology in Education", Assessment 7 EDU 642 "Instructional Multimedia", Assessments 2, 3, 4, 5, 6 EDU 707 "Issues in Educational Technology" Topic 4, Outline VII
2.6.8	design and publish simple on-line documents that present information and include links to critical resources.	EDU 595 "Telecommunication in Education", Evaluation 6
2.6.9	develop instructional units that involve compiling, organizing, analyzing, and synthesizing of information and use educational technology to support these processes.	EDU 643 "Instructional Design", Weeks 1, 2, 3, 7, 8, 9, 10 , 13
2.6.10	use and apply more than one computer authoring and/or programming environment.	EDU 642 "Instructional Multimedia", Topics 1, 4, 9
2.6.11	describe the characteristics and uses of current authoring environments and evaluate their appropriateness for classroom applications.	EDU 642 "Instructional Multimedia", Topics 6, 7, 12

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
2.6.12	describe the characteristics and uses of current programming and scripting environments and evaluate their appropriateness for classroom use.	EDU 642 "Instructional Multimedia", Topic 12
2.6.13	apply instructional design principles to the design of screens, text, graphics, audio, and video in instructional products under development.	EDU 642 "Instructional Multimedia", Topics 5, 7, 12, 15
2.6.14	describe and practice strategies for testing and evaluating instructional products designed.	EDU 642 "Instructional Multimedia", Topics 10, 12, 15 EDU 707 "Issues in Educational Technology" Topic 2, Outline II
2.6.15	apply instructional design principles to develop substantive interactive multimedia computer-based instructional products.	EDU 642 "Instructional Multimedia", Topics ALL EDU 643 "Instructional Design", Weeks 11, 12
3.0	<p>Professional Preparation in Educational Computing and Educational Technology</p> <p>Professional studies in educational computing and educational technology require knowledge about use of computers and related technologies to support teaching and learning. Advanced programs preparing educators for a specialty in educational computing and educational technology require studies of, and experiences with, concepts and skills related to use of educational technology-based systems in K-12 education.</p>	
3.1	<p>Instructional Program Development</p> <p>Candidates will develop curricular plans based on local, state, and national standards for the use of computers and other associated technologies.</p>	EDU 590 "Advanced Technology in Education", Topic 2
Performance Indicators - Candidates Will:		

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
3.1.1	describe and analyze accepted principles of strategic planning to facilitate curriculum design for teaching with computers and related technologies.	EDU 707 "Issues in Educational Technology" Topics 1, 2, 3, 5, Outline I, II, III, IV, VI
3.1.2	identify and use national, state, and local guidelines to develop curriculum plans for integrating educational technology in the K-12 environment.	EDU 590 "Advanced Technology in Education", Topic 2
3.1.3	plan strategies to mentor other educators and demonstrate leadership regarding Information Age learning practices and techniques.	EDU 595 "Telecommunication in Education", Topic 2, Evaluation 7
3.2	<p>Teaching Methodology</p> <p>Candidates will effectively plan, deliver, and assess concepts and skills relevant to educational technology across the curriculum. Candidates will apply effective methods and strategies for teaching the use of educational technology tools.</p>	
Performance Indicators - Candidates Will:		
3.2.1	design and practice methods and strategies for teaching concepts and skills related to computers and related technologies including keyboarding.	EDU 590 "Advanced Technology in Education", Topic 10
3.2.2	design and practice methods and strategies for teaching concepts and skills for applying productivity tools.	EDU 590 "Advanced Technology in Education", Topic 9 and 10
3.2.3	design and practice methods and strategies for teaching concepts and skills for applying information access and delivery tools.	EDU 590 "Advanced Technology in Education", Topic 8 and 12
3.2.4	design and practice methods and strategies for teaching problem solving principles and skills using educational technology resources.	EDU 590 "Advanced Technology in Education", Topic 4, 5 and 6

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
3.2.5	design and implement integrated educational technology classroom activities that involve teaming and/or small group collaboration.	EDU 590 "Advanced Technology in Education", Topic 11 and 12
3.2.6	identify activities and resources to support regular professional growth related to educational technology.	EDU 590 "Advanced Technology in Education", Topic 1 and 11
3.2.7	identify professional organizations and groups that support the field of educational computing and educational technology.	EDU 590 "Advanced Technology in Education", Topic 1
3.2.8	design a set of evaluation strategies and methods that will assess the effectiveness of instructional units that integrate computers/ educational technology.	EDU 707 "Issues in Educational Technology" Topics 2, 3, 6, Outline III, IV
3.2.9	demonstrate methods for teaching hypermedia development, scripting, and/or computer programming in a problem-solving context in K-12 schools.	EDU 642 "Instructional Multimedia", Topics 1, 15
3.2.10	demonstrate methods for teaching at least one modern authoring tool to students.	EDU 642 "Instructional Multimedia", Topics 1, 4, 9
3.2.11	demonstrate methods for teaching uses of media-based tools, such as television, audio, print media, and graphics.	EDU 642 "Instructional Multimedia", Topics 5, 7, 12, 15
3.2.12	demonstrate methods for teaching social, ethical, and legal issues and responsible use of educational technology.	EDU 707 "Issues in Educational Technology" Topic 5, Outline VI

No.	Guideline/Standard	Narrative Explaining how Required Courses and/or Experiences Fulfill the Guidelines for Endorsement
3.3	<p>Field Experiences Candidates will participate in field experiences that allow them to (1) observe the use of educational technology to support instruction, and the evaluation of effectiveness of educational technology resources for teaching and learning; and (2) apply educational technology resources to support instruction in classroom settings.</p>	
Performance Indicators - Candidates Will:		
3.3.1	observe and compare methods and strategies used in educational technology in a variety of authentic educational settings (i.e., elementary, middle, secondary, adaptive assistive classrooms, labs).	EDU 590 “Advanced Technology in Education”, Topic 11
3.3.2	develop and teach a series of lessons that apply educational technology resources to support instruction.	EDU 707 “Issues in Educational Technology” Topic 3

Instructional Faculty

Institution: Central Michigan University

Date: 2/01

Specialty Program: Educational Technology

Certification/Endorsement CODE:

Please include all faculty teaching the courses shown on the *Summary of Course Requirements for Specialty Program* (Application Attachment 3), including those who may be temporary or non-tenure stream.

Courses	Faculty Member	Highest Degree in this Specialty Area, Indicating Study Focus and Research Area	Professional Development Experience in the Last 3 Years	Familiarity with K-12 Curriculum Framework and MEAP Assessment	Special Awards and Recognition	P-12 Collaborative Work
LL	Dr. Tim Brannan	Ph.D. Extension Education	Classroom Performance Systems, PalmOne Education Technology Coordinator	Attended MDE meetings on the 7 th standard. Familiar with K-12 curriculum.	J. Edwin Towle Professorship	Project Director for Title IIA Improving Teacher Quality grant and Title IIB Math/Science Partnership Grant
LL	Dr. William Merrill	Ph.D. Instructional Technology	Numerous AACE conferences, Completed ten online classes at Macromedia University,	Attended MDE meetings on the 7 th standard. Familiar with K-12 curriculum & all seven entry-level standards.	Past-President of the Michigan Council of Teachers of Mathematics	Work with a number of schools/districts on integrating technology in the classroom
LL	Dr. Ming Zhang	ED.D. Curriculum & Instruction	Handheld computer workshop CPS 282 Intro to Multimedia Design CPS assessment training	Workshop on applying MiClimb Use MCF in teaching science methods courses for preservice students and running workshops for inservice teachers.		ITQ Grant with 6 teachers in Highland Park school district (2002-2004) as project director
LL	Dr. Shane Cavanaugh	Ph.D. Educational Psychology	Digital Video Production, Robotics, Technology/Curriculum Integration	Former high school Science and English teacher		U.S. Department of Education Technology Innovation Challenge Grant U.S. Department of Education 2

						Century Community Learning Center Grant, Title III Math/Science Partnership Gr.
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CENTRAL MICHIGAN UNIVERSITY
 COLLEGE OF EDUCATION AND HUMAN SERVICES
 Department of Teacher Education and Professional Development
 Master Course Syllabus

EDU	590	Advanced Technology in Education	3 (2-3)
Designator	Number	Course Title	Credit(Mode)

- I. Bulletin Description:** Students will study and practice the integration of computer technology in classroom instruction and management, with emphasis upon software evaluation and lesson design. Identical to SPE 510, credit may not be earned in more than one of these courses.
- II. Prerequisites:** EDU 290 or permission of instructor.
- III. Rationale for Course Level:** This course is designed for graduate students and is required for several masters degree programs in the department.
- IV. Textbooks and Other Required Materials to be Furnished by the Student:**
 “The Computer as an Educational Tool: Productivity and Problem Solving, 4th edition” By Richard C. Forcier ISBN: 0-13-113885-5. Pearson/Merril/ Prentice Hall, Columbus, OH. An external storage device, e.g. USB drive.
- V. Special Requirements of the Course:**
 None
- VI. General Methodology:**
 This course is taught through a combination of lecture, class discussion, and technology based activities. Students have the opportunity to learn skills in designing, implementing, and evaluating web resources and interactive multimedia (IMM) for the facilitation of learning for students, including those with disabilities. Techniques for lesson planning, evaluation, and individualization of content area learning will also be included.
1. Technology based activities
 2. Cooperative learning exercises
 3. Projects and presentations
 4. Videotape, CDROM, and other media-based presentations
 5. Distance learning via email, internet access, Blackboard, online tutorials
 6. Research
 7. Readings
 8. Lecture and Discussion
- VII. Course Objectives:**
Concept- and knowledge-driven: A professional educational practice that is concept and knowledge- driven has, as its foundation, content knowledge. This knowledge base is acquired through serious study and developed through research.
- LEA- LEArner centered:** A professional educational practice that is learner-centered focuses on the

cognitive, affective and physical needs, and characteristics of each learner. It is based on the belief that all learners grow and develop throughout life and that all students can learn.

R- Reflective practice relevant to diverse settings and roles: Educators will work in diverse settings – from the large, urban high school to the small, rural school. Communities and socioeconomic backgrounds. Best educational practice required recognition of and provisions for these differences.

After completing this course, students will be able to:

1. Summarize the historical evolution of computing and media based technologies. (C,LEA,R)
2. Discuss theoretical learning principles and approaches of change and technological literacy in teacher education. (C,R)
3. Categorize and discuss instructional factors relevant to all interactive multimedia and Web-based learning that affect learning in the classroom. (C,LEA,R)
4. Evaluate and discuss tutorial, drill, simulation, web resources and educational game software in regard to presentation of information, guidance, and evaluation of learning. (LEA,R)
5. Demonstrate competency in evaluating World Wide Web sites for appropriateness and accuracy of information. (LEA,R)
6. Demonstrate competency in assessing the quality and usefulness of assorted software and courseware packages. (LEA,R)
7. Identify ways in which technology facilitated instruction may be applied in diverse and individualized ways including using WebQuests. (LEA,R)
8. Demonstrate competency with authoring, troubleshooting, and operating assorted technologies (computer as host and peripheral technologies). (C,LEA,R)
9. Demonstrate competency of assorted application, utility, and communications software. (LEA,,R)
10. Demonstrate competency in operating assorted technologies (computer as host, peripheral technologies, and augmentative communication devices). (LEA,R)
11. Identify individual roles, responses, and responsibilities prerequisite to technology-facilitated instruction. (LEA,R)
12. Write technology based lesson plans that are appropriate to students and accurately reflect key elements found in good instructional design. (LEA,R)
13. Design appropriate rubrics to assess learning with technology activities. (C,LEA,R)
14. Demonstrate knowledge of and competency using adaptive technology. (C,LEA,R)

VIII. Course Outline:

1. Introduction to educational technology uses in schools. Selecting good and assessing software, websites and courseware (3 hours).
2. Effective and efficient web searching. Evaluating web pages with rubrics (4 hours).
 3. W3 Accessibility Standards (2 hours).
4. Assistive technology in the classroom (2 hours).
5. Learning and instruction (6 hours).
6. Computer applications in education (3 hours).
7. Classroom applications as learning tools (3 hours).
8. Internet Applications in Education (3 hours).
9. Webquests (6 hours).
10. Dealing with social and legal issues surrounding the use of technology in schools (2 hours).
11. e-Cheating (2 hours)

12. Using technology to enhance teaching and learning in the classroom (6 hours).
13. Building appropriate rubrics to assess technology use (3 hours).
14. Student Presentations (3 hours).

IX. Evaluation:

1. Assigned Readings: Should be completed prior to class (including chapters from the textbook and class handouts).
2. Paper: (50 points) Research Paper on social and legal issues technology use in schools/give PowerPoint presentation on research.
3. Technology-based Projects: (20 points).
 - a. Evaluate educational software/courseware and World Wide Web sites
 - b. Research adaptive technology in the classroom
 - c. Create a Webquest based on an actual lesson
4. Technology Project: (20 points) Technology Unit Development. Graduate students may either create a CD-ROM or use an authoring system to design an assessment tool which could be used to teach students within the public school setting.

Grading:

The percentage of points pertaining to each of the evaluation component for graduate students is described below:

1. Participation	10%
2. Paper and Presentation	50%
3. Technology-based Projects	20%
4. Technology Project	20%

Syllabus Prepared By:

Dr. Timothy Brannan (Name)
 _____ (Signature)
January 27, 2005 (Date)

X. Bibliography

Books:

- Alessi, S.M. & Trollip, S.R., (2001). *Multimedia for learning: Methods and developments*. Boston: Allyn & Bacon.
- Alvear, J. (1998). *Web Developer.Com Guide to Streaming Multimedia*. New York: John Wiley and Sons.
- Ames, A. A., Nadeau, D. R. & Moreland, J. L. (1997). *VRML 2.0 Sourcebook* (2nd ed.). Chichester: John Wiley and Sons.
- Clarke, C., Swearington, L. & Anderson, David K. (1997). *Shocking the Web (Windows edition)*. Berkeley, California: Marcromedia Press.
- Clark, R.C. & Mayer, R.E. (2002). *e-Learning and the science of instruction*. New York: Jossey-Bass.
- Droblas, A. & Greenberg, S. (2002). *Adobe Premiere 6.5 Bible*. New York: John Wiley & Sons.
- Dillon, P. M. (1998). *Multimedia and the Web from A to Z* (2nd ed.). Phoenix, Arizona: Oryx Press.
- Horton, W. (2002). *Designing web-based training: How to teach anyone anything anywhere anytime*. New York: John Wiley & Sons.
- Kerman, P. (2002). *Sams Teach Yourself Flash MX in 24 Hours*. New York: Sams.
- England, E. & Finney, A. (2001). *People and Process: Managing Multimedia: Project Management for Web and Convergent Media*. Boston: Pearson Higher Education.
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- Gulie, S. W. (1999). *QuickTime for the Web: A Hands-On Guide*. Boston: AP Professional.
- Heid, J. (2002). *The Macintosh Digital Hub: An Interactive Guide to iTunes, iPhoto, iMovie, and iDVD*. Berkeley, CA: PeachPit Press.
- Hill, J.R. (1999). A conceptual framework for understanding information seeking in an open-ended information systems. Educational technology and development. 47(1), 5-27.
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- Jonassen, D.H. (2000). Computers as mind tools for school: Engaging critical thinking. Upper Saddle River, NJ: Merrill
- Kerman, P. (2002). *Sams Teach Yourself Flash MX in 24 Hours*. New York: Sams.
- Lee, W.W. & Owens, D.L. (2002). *Multimedia-based instructional design: Computer-based training*,

- webbased training, and distance learning*. New York: Jossey-Bass.
- Lunefeld, P. (2000). *The Digital Dialectic: New Essays on New Media*. Boston: MIT Press.
- Male, M. (1996). *Technology for Inclusion*. Boston: Allyn & Bacon.
- Manovich, L. (2002). *The Language of New Media*. Boston: MIT Press.
- Mayer, R.E. (2001). *Multimedia learning*. Cambridge University Press.
- McEvoy, S. (2000). *Microsoft Windows Media Player 7 Handbook*. Redmond, California: Microsoft Press.
- Packer, R., Jordan, K., & Gibson, W. (eds) (2002). *Multimedia: From Wagner to Virtual Reality*. New York: W.W. Norton & Co.
- Patterson, J. & Melcher, R. (1998). *Audio on the Web*. Berkeley, California: Peachpit Press.
- Roblyer, M.D. (2003). *Integrating Educational Technology into Teaching*. Columbus, OH: Merrill/Prentice Hall.
- Roblyer, M.D. (2003). *Starting Out on the Internet: A Learning Journey for Teachers*. Columbus, OH: Merrill/Prentice Hall.
- Smith, P.L., & Ragan, T.J. (1999). Instructional design. (2nd ed.) Upper Saddle River, NJ:Prentice Hall
- Vaughan, T. (2001). *Multimedia: Making it Work*. Boston: McGraw-Hill/Osborne Media.

Web Sites:

Graphics Sites:

- Flaming Text: <http://www.flamingtext.com/>
- CoolText: <http://www.cooltext.com/>
- MediaBuilder: <http://www.mediabuilder.com/>
- WebFX: <http://www.webgfx.ch/titlepic.htm>
- Interface Graphics: <http://www.absolutecross.com/graphics/interfaces/>
- Seamless Textures: <http://www.absolutecross.com/graphics/textures/>
- Brucies Buttons: <http://www.brucies.com/index.html>
- Education Clip Art: http://www.lausd.k12.ca.us/Norwood_EL/educationpics/
- BellsNWhistles: <http://www.bellsnwhistles.com/>
- Graphics & Clip Art: <http://www.kn.pacbell.com/wired/fil/pages/listgraphicscy.html>
- Great Graphics Vault Index: http://rats2u.com/calendar_a/calendar_clipart.htm
- WebDeveloper.com: <http://www.webdeveloper.com/animations/>

Research Sites:

- ERIC Clearinghouses: <http://mteachers.org/eric/index.html>
- Education Newsletters and Articles on the WWW: <http://mteacher.org/eddan/index.html>
- Content Information Links: <http://www.ehhs.cmich.edu/tepd/pdsite/curriculum/index.html>
- Brain-Based Teaching and Learning Sites: <http://mteachers.org/curriculum/tlws.html>
- North Central Regional Education Laboratory: <http://www.ncrel.org/>

Education Week on the Web: <http://www.edweek.org/>
The National Center for Educational Statistics: <http://nces.ed.gov/>
Trends in International Mathematics and Science Study [TIMSS]: <http://timss.bc.edu/timss2003.html>

Tutorial Sites:

Searching the World Wide Web: Links to tutorials and hundreds of general and specific search engines:
<http://miteachers.org/curriculum/searching/index.html>
Introduction to Network Etiquette: <http://jade.wabash.edu/wabnet/info/netiquet.htm>
Protect Yourself Online: <http://www.learnthenet.com/english/section/protect.html>
Software Tutorials: Links to multiple tutorials for different kinds of software:
<http://miteachers.org/prodev/wbtutorials.html>

Photoshop Tutorials:

TheTutorial.com: http://www.thetutorial.com/Graphics_Tutorials/
Net Corridor: <http://www.netcorridor.yellowpipe.com/tutorials.php>
Photoshop Resource: Pattern Maker Filter Fun:
<http://www.photoshopresource.com/Tutorials2003/March/PS7Patterns/default.asp>
Photoshop Resource: Brush Magic:
<http://www.photoshopresource.com/Tutorials2003/March/PSBrushMagic/default.asp>
Photoshop Tutorials: <http://www.learnphotoshop.net/smartpages/sitemap.htm>
Photoshop Links: <http://www.bhsu.edu/artssciences/asfaculty/pkopco/pslinks.htm>

Rubric and Web Evaluation Sites:

Five Criteria for Evaluating Web Sites: <http://www.library.cornell.edu/okuref/webcrit.html>
Evaluating Quality on the Net: <http://www.hopetillman.com/findqual.html>
ICYouSee: T is for Thinking: <http://www.ithaca.edu/library/Training/hott.html>
Evaluating Web Resources:
<http://www2.widener.edu/Wolfgram-Memorial-Library/webevaluation/webeval.htm>
Web Resource Evaluation Techniques:
<http://www2.widener.edu/Wolfgram-Memorial-Library/webeval/eval1198/index.htm>

WebQuest Sites:

WebQuest Resources: Links to WebQuest development sites and hundreds of sites offering ready-made WebQuests: <http://miteachers.org/webquest/index.html>

Education Sites:

Best of the World Wide Web: Links to hundreds of excellent sites for teachers and administrators:
<http://miteachers.org/bestwww.html>
The Council for Exceptional Children <http://www.cec.sped.org/>
Technology and Media Division <http://www.tamcec.org/>
504 Plans <http://www.wrightslaw.com/info/sec504.index.htm>

Journals:

Online Journals and Magazines: Links to hundreds of online education journals:
<http://miteachers.org/curriculum/journalsol.html>

Articles:

General Readings on Technology in Education:

- Internet Guidelines and Culture by Arlene H. Rinaldi: <http://www.fau.edu/netiquette/net/culture.html>
- Don't Spread that Hoax: <http://www.nonprofit.net/hoax/default.htm>
- Effective Use of Computers with Young Children by Linda J. Burkhart: <http://www.lburkhart.com/handcomp.html>
- Strategies and Applications for the One Computer Classroom: <http://www.lburkhart.com/elem/strat.htm>
- What We Are Learning About Early Learners and Augmentative Communication and Assistive Technology by Linda J. Burkhart: <http://www.lburkhart.com/gphb.htm>
- Piracy, Pornography, Plagiarism, Propaganda, Privacy: Teaching Children to Be Responsible Users of Technology Protects Their Rights and the Rights of Others: <http://www.computerlearning.org/articles/Ethics98.htm>
- Computer Learning Foundation Code of Responsible Computing: <http://www.computerlearning.org/RespCode.htm>
- Computer Learning Foundation Emphasizes Responsible Use of Technology by Sally Bowman Alden: <http://www.computerlearning.org/articles/respmyth.htm>
 - The Information Highway and Our Children by Sally Bowman Alden & Alex Curyea: <http://www.computerlearning.org/articles/InfoHwy.htm>
 - How Can We Dramatically Improve the Quality of Education through the Use of Computers and Related Technologies? by Frances Richardson: <http://www.computerlearning.org/articles/Improve1.htm>
 - Technology Foundation Standards for All Students: http://cnets.iste.org/students/s_stands.html
 - Profiles for Technology Literate Students [make sure you visit and read the material for each of the grade blocks] : http://cnets.iste.org/students/s_profiles.html
 - Educational Technology Foundations for All Teachers: http://cnets.iste.org/teachers/t_stands.html
 - Michigan Entry Level Standard # 7: <http://www.ehhs.cmich.edu/~wmerrill/mistandard7.html>
 - Preface: <http://www.nap.edu/readingroom/books/techgap/navigate.cgi>
 - The Nintendo Generation
 - The Technology Juggernaut
 - The Network Revolution
 - Networking K-12 Education
 - New Models for Education
 - Systemic Reform
 - Investing in Teachers
 - Ensuring Equity
 - Burgeoning Markets
 - Opportunity to Change
 - Learning about Learning Social Issues on the Internet

Access Issues

Critical Issue: Ensuring Equitable Use of Education Technology by NCREL:

<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te400.htm>

Technology and Equity by Delia Neuman: http://www.ed.gov/databases/ERIC_Digests/ed339400.html

Teacher Education and Gender Equity by Jo Sanders:

http://www.ed.gov/databases/ERIC_Digests/ed408277.html

Women and Minorities in High-Tech Careers by Bettina Lankard Brown:

http://www.ed.gov/databases/ERIC_Digests/ed452367.html

Internet Access and Content for Urban Schools and Communities by James M. Lonergan:

http://www.ed.gov/databases/ERIC_Digests/ed446180.html

Making Web Sites Work for People with Disabilities by Andrea L. Foster:

<http://chronicle.com/free/v47/i21/21a03001.htm>

With Accessibility for All by Chuck Moozakis: <http://www.teledotcom.com/article/TEL20010119S0025>
Are Low-Income Schools Stalled on the Information Superhighway?:
http://www.cgs.edu/inst/trc_reach.html
The Digital Divide Persists in US by Michael Pastore:
http://cyberatlas.internet.com/big_picture/demographics/print/0,1323,5901_158701,00.html

Speech Issues on the Internet:

Should we Kill? Can we Kill the Messenger...: <http://www.fmew.com/archive/cults/>
Virtual Fuhrer by Curt Guyette: <http://www.metroactive.com/papers/metro/08.08.96/netnazis-9632.html>
Multiculturalism, Racism, and Hate Speech by Thelma McCormack:
http://www.math.yorku.ca/ISR/newsletter/multi_racism_hate.htm
Government Censorship Trial Begins:
http://www.eff.org/Legal/Cases/Multnomah_Library_v_US/20020322_eff_aclu_cipa_pr.html
The Lawless Internet by Mick Brady: <http://www.ecommercetimes.com/perl/story/4026.html>
Letter to the Editor by Penelope Seator: <http://www.nostatusquo.com/ACLU/aclu/PennySeator.html>

Pornography:

Indecency on the Internet: Lessons from the Art World by Julie Van Camp:
<http://www.csulb.edu/%7ejvancamp/article1.html>
Cyberwire Dispatch II by Brock Meeks: <http://www.ethics.ubc.ca/resources/computer/meeks.html>
OCAF White Paper on Internet Pornography: <http://www.bway.net/%7edfenton/manifesto.html>
Enough-Is-Enough – Sharks: <http://www.enough.org/sharks.htm>

Filtering:

Campaign for Web Liberty by EFF:
http://www.eff.org/Censorship/Ratings_filters_labelling/19990907_gilc_intl_ratings_stateent.html
Speak freely, Act Responsibly: http://pageturners.com/CDA/rs_1st.htm
A quick review of the major points of the Responsible Speech Campaign:
http://pageturners.com/CDA/rs_pnts.htm
Study Outlines Safety Tips for Kids: Online study finds perpetrators are younger than you'd expect:
http://www.safekids.com/articles/ft_study.htm
Filtering Programs Useful but Far From Perfect: <http://www.safekids.com/articles/filtering2000.htm>

Copyright and the Internet:

A Brief Intro to Copyright by Brad Templeton: <http://www.templetons.com/brad/copyright.html>
10 Big Myths about Copyright Explained by Brad Templeton:
<http://www.templetons.com/brad/copymyths.html>
Copyright Notice: <http://www.benedict.com/info/notice/notice.asp>
Copyright Fair Use: <http://www.benedict.com/info/fairUse/fairUse.asp>
Copyright Public Domain: <http://www.benedict.com/info/publicDomain/publicDomain.asp>
Fair Use Guidelines for Educational Multimedia: http://www.it.cmich.edu/it/policies_multi_fairuse.asp

Netiquette:

Introduction to Network Etiquette: <http://jade.wabash.edu/wabnet/info/netiquet.htm>

CENTRAL MICHIGAN UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES
Department of Teacher Education and Professional Development
Course Syllabus

EDU	595	Telecommunication in Education	3 (2-2)
Designator	Number	Course Title	Credit(Mode)

- I. **Bulletin Description:** The study and laboratory exploration of telecommunication as used in schools and classrooms; e-mail, educational and general networks, collaborative lessons.

- II. **Prerequisites:** EDU 590; or equivalent with permission of instructor.

- III. **Rationale for Course Level:** n/a

- IV. **Textbooks and Other Required Materials to be Furnished by the Student:**
 Young, M.L., & Levine, J. (2000). *Poor Richard's Building Online Communities: Create a Web Community for Your Business, Club, Association, or Family*. Lakewood, CO: Top Floor Publishing.
 External storage devices.

- V. **Special Requirements of the Course:**
 Determined by the instructor.

- VI. **General Methodology Used in Teaching the Course:**
 Weekly lectures with discussions and class project reports, followed by exploration of and participation in telecommunication activities in the laboratory

- VII. **Course Objectives:**
 - C- **Concept- and knowledge-driven:** A professional educational practice that is concept and knowledge-driven has, as its foundation, content knowledge. This knowledge base is acquired through serious study and developed through research.

 - LEA- **LEArner centered:** A professional educational practice that is learner-centered focuses on the cognitive, affective and physical needs, and characteristics of each learner. It is based on the belief that all learners grow and develop throughout life and that all students can learn.

 - R- **Reflective practice relevant to diverse settings and roles:** Educators will work in diverse settings — from the large, urban high school to the small, rural school. Communities and schools are comprised of diverse people from a wide variety of cultural, ethnic, racial and socioeconomic backgrounds. Best educational practice requires recognition of and provisions for these differences.

- After completing this course, the student will be able to:**
 - 1. explain the concept of:
 - a. a learning community; {c}
 - b. mailing lists; {c}

- c. Usenet Newsgroups; {c}
 - d. ICQ, IM, IRC, and chat; {c}
 - e. bulletin boards; {c}
 - f. MUDs, MOOs, and Virtual Worlds; {c}
 - g. video conferencing; {c}
 - c. privacy and spam; {c}
 - d. Netiquette, Safety, and Internet Language. {c}
2. develop a learning community web site for teaching that permits all interested individuals to take part in the community; {c, lea, r}
 3. use multiple methods to access and serve information in their learning community; {c, lea, r} and
 4. demonstrate an ability to monitor, maintain, and update their learning community to meet all users needs. {c, lea, r}

VIII. Course Outline:

Weeks:	Topic
1	Introduction to Learning Communities—reasons for developing a community in education
2	Six stages of Online Communities
3	Developing a community purpose and a home web page for a community
4	Rules, Netiquette, Safety, and Internet Language
5	Finding, joining, and participating in mailing lists
6	Creating and managing your own mailing list
7	Finding, joining and participating in Newsgroups
8	Creating and Managing your own Newsgroup
9	Finding, joining and participating in IRC
10	Creating and Managing your own IRC
11	MUDs, MOOs, and Virtual Worlds
12	Commercial and Community managed chat, ICQ, and bulletin boards
13	Video Conferencing
14	Privacy, Spam, and Other Community Issues
15	Final polishing of your Learning Community
16	Presenting Your Community to the Class

	Undergraduate	Graduate
Mailing List Assignment	10%	7%
Newsgroup Assignment	10%	7%
IRC Assignment	10%	7%
Chat and Bulletin Board Assignment	10%	7%
Video Conferencing Assignment	10%	7%
Final Learning Community Online	50%	50%
Research Paper on the Value of Educational Learning Communities	0%	15%

Syllabus Prepared By:

William Merrill (Name)



(Signature)

February, 2004

(Date)

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Selected Resources:

Web Sites:

ICQ:	http://www.icq.com/
	http://www.icgplus.org/
IM:	am://www.aol.com/aim/
	http://messenger.msn.com/
	http://messenger.yahoo.com/
MUDs, MOOS, & Virtual Worlds	http://net.gurus.com/telnet/
	am://www.mudconnector.org/mudfaq/
	http://www.godlike.com/muds/
	http://www.ccon.org/hotlinks/worlds.html
Copyright Issues	http://lcweb.loc.gov/copyright/
	http://lcweb.loc.gov/copyright/cires/circ21.pdf
	http://www.templetons.com/brad/copyright.html
	http://www.benedict.com/info/notice/notice.asp
	http://www.benedict.com/info/fairUse/fairUse.asp
	http://www.benedict.com/info/publicDomain/publicDomain.asp
	am://www.it.cmich.edu/it/policies_multi_fairuse.as
	http://www.templetons.com/brad/copymyths.html
Netiquette	http://www.wabash.edu/technology/wabnet/neti. uette.cfm
Bulletin Boards	am://www.teaching.com/ttalk/
	http://fart-machines.com/include/links2_27.html
	http://www.searchup.com/
	http://homeparents.about.com/library/weekly/aaO81498.htm
Net Cams	http://chili.rt66.com/ozone/cam.htm
Mailing Groups	http://groups.yahoo.com/
	http://www.topica.com/
	http://paml.alastra.com/
	http://www.lsoft.com/lists/listref.html
USENET	http://echoes.free.fr/nntpbot/nntpbot.php3?action=list
	http://groups.google.com/
	http://www.newsguy.com/drnhelpw.htm
Privacy	http://www.w3.org/P3P/
	http://dollar.ecom.cmu.edu/p3peritique/
Accessibility	p://www.w3.org/
	http://www.w3.org/WAI/

CENTRAL MICHIGAN UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES
Department of Teacher Education and Professional Development
Master Course Syllabus

EDU	642	Instructional Multimedia	3 (3-0)
Designator	Number	Course Title	Credit(Mode)

- I. **Bulletin Description:** Students will study, practice and apply how to appropriately and effectively implement multimedia technologies in classroom environments.
- II **Prerequisites:** EDU 590
- III. **Rationale for Course Level:** n/a
- IV. **Textbooks and Other Required Materials to be Furnished by the Student:**
Windows or Macintosh Lab:
Vaughan, T. (2001). *Multimedia: Making it Work*. Boston: McGraw-Hill/Osborne Media.
Kerman, P. (2002). *Sams Teach Yourself Flash MX in 24 Hours*. New York: Sams.
Droblas, A. & Greenberg, S. (2002). *Adobe Premiere 6.5 Bible*. New York: John Wiley & Sons. **Or,**
Macintosh Lab:
Vaughan, T. (2001). *Multimedia: Making it Work*. Boston: McGraw-Hill/Osborne Media.
Kerman, P. (2002). *Sams Teach Yourself Flash MX in 24 Hours*. New York: Sams.
Heid, J. (2002). *The Macintosh Digital Hub: An Interactive Guide to iTunes, iPhoto, iMovie, and iDVD*. Berkeley, CA: PeachPit Press.
Everyone:
External storage devices
- V. **Special Requirements of the Course:**
None
- VI. **General Methodology Used in Teaching the Course:**
1. Technology based activities
2. Cooperative learning exercises
3. Projects and presentations
4. Videotape, CD ROM, and other media
5. Distance learning via E Mail, Internet access, or online services, or tutorials
6. Research
7. Readings
8. Lecture and discussion
- Course Goals:**
As a required course in the classroom applications of technology masters, this course seeks to help students understand that teaching with technology is *concept and knowledge driven, learner-centered, and relevant to multiple contexts and roles*. This course is designed to provide students with a theoretical and pragmatic understanding of technology based teaching and learning.

VII. Course Objectives:

C- Concept- and knowledge-driven: A professional educational practice that is concept and knowledge-driven has, as its foundation, content knowledge. This knowledge base is acquired through serious study and developed through research.

LEA- LEArner centered: A professional educational practice that is learner-centered focuses on the cognitive, affective and physical needs, and characteristics of each learner. It is based on the belief that all learners grow and develop throughout life and that all students can learn.

R- Reflective practice relevant to diverse settings and roles: Educators will work in diverse settings – from the large, urban high school to the small, rural school. Communities and schools are comprised of diverse people from a wide variety of cultural, ethnic, racial and socioeconomic backgrounds. Best educational practice requires recognition of and provisions for these differences.

After completing this course, the student will be able to:

1. develop Macromedia Flash movies for the web and as stand alone applications; {c}
2. digitize video and audio from various sources; {c}
3. transform analog video to DV format; {c}
4. create movies in various formats; {c}
5. appropriately and effectively implement multimedia in an instructional environment with attention to varied learning styles, special needs populations, and diversity of students; {c, lea, r}
6. demonstrate knowledge of basic multimedia hardware and software; {c, lea, r}
7. demonstrate knowledge of advanced multimedia hardware and software; {c, lea, r}
8. create animated GIFs; {c}
9. create web-based and stand alone multimedia learning environments; {c, lea, r}
10. evaluate the effectiveness of multimedia instruction with regard to conventional instruction methods; {c, lea, r}
11. demonstrate methods of implementing student use of multimedia; {c, lea, r}
12. evaluation procedures for current commercial multimedia titles; {c, lea, r}
13. integrate interactive, multimedia web sites into classroom instruction; {c, lea, r}
14. demonstrate effective means of evaluating student created multimedia projects; {c, lea, r}
15. demonstrate self-evaluation techniques appropriate for multimedia enhanced instruction. {c, lea}
16. demonstrate knowledge of and ability to use synchronized Multimedia Integration Language [SMIL]

VIII. Course Outline:

Week	Content
1	What is Multimedia? Definitions, descriptions, concepts. Multimedia applications: hypermedia, presentations. Uses of hypermedia and multimedia (presentations, tutorial, student use, resource, enrichment, etc.).
2	Making effective use of multimedia. Pedagogical concerns, design issues, stand-alone or web-based. CD-ROM vs DVD delivery of multimedia, Introduction to Macromedia Flash
3	Macromedia Flash Continued
4	Macromedia Flash Continued
5	Advanced HTML and Streaming Video
6	Advanced HTML and Streaming Video
7	Synchronized Multimedia Integration Language [SMIL]
8	Synchronized Multimedia Integration Language [SMIL] continued
9	Real time video, audio, and text communication
10	Optional uses of multimedia as an instructional tool (student use, presentation use).
11	Integrating multimedia in word processing, databases, spreadsheets
12	Integrating multimedia in PowerPoint
13	Dynamic content in multimedia
14	Dynamic content on the World Wide Web
15	Work on multimedia assignments
16	Student Presentations

IX. Evaluation:

- | | |
|--|-----|
| 1. Participation | 5% |
| 2. Macromedia Flash — Web-Based with Dynamic Content | 20% |
| 3. Macromedia Flash — Stand-Alone | 15% |
| 4. PowerPoint Multimedia presentation | 15% |
| 5. Real Presenter/PowerPoint/Video presentation | 25% |
| 6. Web Page with Dynamic Content | 20% |

Required Hardware for EDU 642:


1. A computer lab [Windows or Mac OS] with one computer per student
2. At least one CD-RW/DVD burner
3. At least one scanner
4. At least one digital camera
5. At least two WebCams
6. At least one Mini-DV camcorder
7. At least one computer with Firewire ports
8. Internet access for all the computers
9. A video projector for the teacher station

Required Software for EDU 642:

1. Integrated Software:
 - a. Microsoft Office
2. Photograph Imaging Software: a.
 - a. Adobe Photoshop

3. Multimedia Software
 - a. Macromedia Flash
4. Presentation Software:
 - a. PowerPoint [part of Office]
 - b. Real Presenter
5. HTML Editor Software:
 - a. Adobe GoLive **OR**
 - b. Macromedia Dreamweaver
6. Video Editing Software:
 - a. Adobe Premiere, **OR**
 - b. Apple iMovies, **AND**
 - c. Apple QuickTime Pro
7. Web Access Software:
 - a. Microsoft Internet Explorer [**NOT** Netscape Communicator]
8. Document Software:
 - a. Adobe Acrobat [**FULL** Version, **NOT** just Acrobat Viewer]

Syllabus Prepared By:

<u>William Merrill</u>	(Name)
<u></u>	(Signature)
<u>February 2004</u>	(Date)

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General

Adam's Multimedia Tutorial: <http://hotwired.lycos.com/webmonkey/multimedia/tutorials/tutorial3.html>

Where's the Beef? Multimedia without Content by Jim Martin:

<http://www.metrognome.com/martin/articles/beef.htm>

Converting Classroom Training to Multimedia CBT by Jim Martin:

<http://www.metrognome.com/martin/articles/cbt.htm>

From Hypermedia to Multimedia to ... Communication by Jim Martin:

<http://www.metrognome.com/martin/articles/hyper.htm>

Multimedia Content and the Super Highway: Rapid Acceleration or Foot on the Brake?

[http://www.oikoumene.com/oikoumene/mmco • ri • ht.html](http://www.oikoumene.com/oikoumene/mmco%20ri%20ht.html)

Hypertext Terms: <http://www.w3.org/Terms.html>

Internetworking Multimedia: <http://www.cs.ucl.ac.uk/staff/jon/mmbook/book/book.html>

Multimedia Authoring Web: <http://www.mcli.dist.maricopa.edu/authoring/> The New

News: <http://www.bluecatdesign.com/bcat/article1.html>

MultiMediator: <http://www.multimediator.com/>

HTML

Introduction to HTML: <http://www.cwru.edu/help/introHTML/toc.html>

Beginners Guide to HTML: <http://archive.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html>

Creating Web Pages (Introductory Level) Theme Page: http://www.cln.org/themes/webpages_intro.html

Creating Web Pages (Advanced Level) Theme Page: http://www.cln.org/themes/webpages_advanced.html

Homepage Building Blocks: <http://www.learningspace.org/content/default.html>

Planning your Site: <http://jeffglover.com/ss/extra07.php>

Sucky to Savvy: <http://jeffglover.com/ss.php>

HTML Cheatsheet: http://hotwired.lycos.com/webmonkey/reference/html_cheatsheet/

Flash

Learning Flash 5: <http://www.trainingtools.com/online/flash5/index.htm>

Becoming a Flash 5 Master: <http://hotwired.lycos.com/webmonkey/01/10/index2a.html> 0

to 60 in Flash: <http://wdvl.internet.com/Multimedia/Flash/Oto60/>

Director

Director and Lingo Tutorials: <http://www.phantom42.com/>

Director 8 Lingo: <http://www.herts.ac.uk/lis/mmedia/directortutorial/lingo8/lingo.html>

Audio

Capturing sound from a CD:

http://www.ausdev.net/dotmag/art-CD_CaptureSound.asp

Playing a .wav File: <http://www.ausdev.net/dotmag/art-PlayWave.asp>

Speech Recognition in VB:

<http://www.ausdev.net/dotmag/art-SpeechRecogn.asp>

Video

Shooting for Chromakeying: http://www.creativecow.net/articles/onneweer_barend/chromashoot/index.htm

DVD Creation in Adobe Premiere: http://www.creativecow.net/articles/gordon_dan/premiere_dvd/index.html
Editing with Final Cut Pro: <http://users.design.ucla.edu/~jbishop/FCPIFCPtutor.htm> DVD – Digital Versatile Disc: <http://www.dvgroup.com/Comdex/DVD/Robert/dvd.html>

PowerPoint

PowerPoint in the Classroom: <http://www.actden.com/pp/>
PowerPoint Tutorial: <http://www.orst.edulinstruction/ed596/ppoint/pphome.htm>

Other Animation

The Art of Animation: <http://webreference.com/dlab/9904/>
Invadirs: <http://brennan.young.net/Edu/Lingvad.html>

Office

Microsoft Office Tutorial: <http://cehs.crosu.edu/webstudent/drh8666/tutorials/office.htm>

PhotoShop

PhotoShop tutorial: <http://medit.stanford.edu/web/training/photoshopl/main.html>

AppleWorks/ClarisWorks

AppleWorks and ClarisWorks Tutorial: <http://home.earthlink.net/~ohora/Clarisworkstutorials.html>

HyperStudio

HyperStudio Tutorial: <http://www.quasar.ualberta.ca/edpy202/tutorial/hstudio/hstudio.htm>

Copyright Issues

A Brief Intro to Copyright by Brad Templeton: <http://www.templetons.com/brad/copyright.html>
10 Big Myths about Copyright Explained by Brad Templeton: <http://www.templeton.com/brad/copymyths.html>
Copyright Notice: <http://www.benedict.com/info/notice/notice.asp>
Copyright Fair Use: <http://www.benedict.com/info/fairUse/fairUse.asp>
Copyright Public Domain: <http://www.benedict.com/info/publicDomain/publicDomain.asp>
Fair Use Guidelines for Educational Multimedia: http://www.it.cmich.edu/it/policies/multi_fairuse.asp

Access Issues

Making Web Sites Work for People with Disabilities by Andrea L. Foster:
<http://chronicle.com/free/v47/i21/21aO3001.htm>
With Accessibility for All by Chuck Moozakis: <http://www.teledotcom.com/article/TEL20010119S0025>
W3C – World Wide Web Consortium: <http://www.w3.org/>

Articles

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Journals

Contemporary Issues in Technology and Teacher Education
Converge
Educational Technology
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IEEE Multimedia
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Information Society, The

Interactive Educational Multimedia
Interactive Multimedia Electronic Journal
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CENTRAL MICHIGAN UNIVERSITY
 COLLEGE OF EDUCATION AND HUMAN SERVICES
 Department of Teacher Education and Professional Development
 Master Course Syllabus

EDU Designator	643 Number	Instructional Design Course Title	3 (3-0) Credit(Mode)
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I. **Bulletin Description:** A study of the principles of instructional design. Designing instructional systems, processes in learning and instruction, delivery systems and evaluating instruction are considered.

II **Prerequisites:** EDU 590

VII. **Rationale for Course Level:** n/a

IV. **Textbooks and Other Required Materials to be Furnished by the Student:**

Instructors are encouraged to select from the following:

Smith, P.O. & Ragan, T.J. (1999). *Instructional Design*. (2nd ed.). New York, NY: Macmillian Publishing Co.

Zook, K. (2001). *Instructional Design for Classroom Teaching and Learning*. Boston, MA: Houghton Miffling Co.

V. **Special Requirements of the Course:**

None

VI. **General Methodology Used in Teaching the Course:**

1. Technology based activities.
2. Cooperative learning exercises.
3. Projects and presentations.
4. Video tape, laser disc, CD ROM, and other media.
5. Distance learning via E Mail, internet access, or on line services, or tutorials.
6. Research.
7. Readings.
8. Lecture and discussion.

Course Goals:

As a required course in the classroom applications of technology masters, this course seeks to help students understand that teaching with technology is *concept and knowledge driven, learner-centered, and relevant to multiple contexts and roles*. This course is designed to provide students with a theoretical and pragmatic understanding of technology based teaching and learning.

VIII. **Course Objectives:**

C- **Concept- and knowledge-driven:** A professional educational practice that is concept and knowledge-driven has, as its foundation, content knowledge. This knowledge base is acquired through serious study and developed through research.

LEA- LEArner centered: A professional educational practice that is learner-centered focuses on the cognitive, affective and physical needs, and characteristics of each learner. It is based on the belief that all learners grow and develop throughout life and that all students can learn.

R- Reflective practice relevant to diverse settings and roles: Educators will work in diverse settings – from the large, urban high school to the small, rural school. Communities and schools are comprised of diverse people from a wide variety of cultural, ethnic, racial and socioeconomic backgrounds. Best educational practice requires recognition of and provisions for these differences.

After completing this course, students will be able to:

1. Operationalize the term and field of instructional design and instructional systems (C).
2. Study the basic processes in learning and instruction (C, LEA).
3. Design appropriate instructional models (C, LEA, R).
4. Apply the principals of individualized instruction for technology based plans, and consider the logic for evaluating lessons and instructional systems (LEA, R).

VIII. Course Outline:

Week 1 An introduction to generic instructional approaches and a brief account of general principals of human learning.

Week 2 An introduction to instructional systems and the systems approach to the design of instruction.

Week 3 Categories of instructional outcomes.

Week 4 Conditions of learning for intellectual skills and cognitive strategies.

Week 5 Conditions of learning for verbal information, motor skills, and attitude.

Week 6 Characteristics of the individual learner, what learners bring to the learning situation.

Week 7 Performance objectives.

Week 8 Purposes and goals of instruction.

Week 9 Constructing sequences of lessons, i.e. topics and modules within a theme.

Week 10 Information processing in learning.

Week 11 Media selection for purposive instruction.

Week 12 Use of media for instructional delivery.

Week 13 Assessing student performance, outcomes of instruction.

Week 14 Group versus individualized instruction.

Week 15 Individualized instruction.

Week 16 Evaluating lessons and systems

IX. Evaluation:

Lab activities 25%

Project 30%

Presentations/demonstrations 10%

Tests/examinations 30%

Involvement/participation 5%

100%

Syllabus Prepared By:

Renay M. Scott (Name)

(Signature)

May 27, 2004 (Date)

X. Bibliography

Current:

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- Zook, K. (2001). *Instructional Design for Classroom Teaching and Learning*. Boston, MA: Houghton Mifflin Co.

Classic:

- Branson, R.K., & Grow, G. (1987). *Instructional Systems Development*. In Gagne's "Instructional Technology: Foundations", Hillsdale, NJ: Erlbaum.
- Cooper, P.A. (1993). Paradigm shifts in designed instruction: From behaviorism to cognitivism to constructivism. *Educational Technology*, 33, 12-19.
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Rothwell, W.J., & Kazanas, H.C. (1992). *Mastering the Instructional Design Process*. San Francisco: Jossey-Bass.

Seels, B., & Glasgow, Z. (1990). *Exercises in Instructional Design*. Columbus, OH: Merrill.

Sheingold, K. (1991). *Restructuring for Learning with Technology: The Potential for Synergy*. *Kappan*, September, 17-27.

Wagner, W. (1990). *Learner's Guide to Accompany Principles of Instructional Design*, Fort Worth: Holt, Rinehart, & Winston.

West, C.K., Farmer, J.A., & Wolff, P.M. (1991). *Instructional Design: Implications from Cognitive Science*. Englewood Cliffs, NJ: Prentice-Hall.

CENTRAL MICHIGAN UNIVERSITY
 COLLEGE OF EDUCATION AND HUMAN SERVICES
 Department of Teacher Education and Professional Development
 Master Course Syllabus

EDU	707	Seminar: Issues in Educational Technologies	3 (3-0)
Designator	Number	Course Title	Credit(Mode)

I. **Bulletin Description:** Study of selected issues relative to the use of new learning technologies in the classroom. Emphasis upon the learning theory which supports applied technologies.

II. **Prerequisites:** EDU 590

III. **Rationale for Course Level:** n/a

IV. **Textbooks and Other Required Materials to be Furnished by the Student:**
 Any required materials selected by the instructor.

V. **Special Requirements of the Course:**
 None

VI. **General Methodology Used in Teaching the Course:**

1. Technology based activities.
2. Cooperative learning exercises and problem solving.
3. Projects and presentations.
4. Video tape, laser disc, CD ROM, and other media.
5. Distance learning via E Mail, internet access, or online services, or tutorials.
6. Research.
7. Readings.
8. Lecture and discussion.

Course Goals:

As a required course in the classroom applications of technology masters, this course seeks to help students understand that teaching with technology is concept and knowledge driven, learner-centered, and relevant to multiple contexts and roles. This course is designed to provide students with a theoretical and pragmatic

VII. **Course Objectives:**

C- Concept- and knowledge-driven: A professional educational practice that is concept and knowledge-driven has, as its foundation, content knowledge. This knowledge base is acquired through serious study and developed through research.

LEA- LEArner centered: A professional educational practice that is learner-centered focuses on the cognitive, affective and physical needs, and characteristics of each learner. It is based on the belief that all learners grow and develop throughout life and that all students can learn.

R- Reflective practice relevant to diverse settings and roles: Educators will work in diverse settings – from the large, urban high school to the small, rural school. Communities and schools are comprised of diverse people from a wide variety of cultural, ethnic, racial and socioeconomic

backgrounds. Best educational practice requires recognition of and provisions for these differences.

After completing this course, the student will be able to:

1. examine and discuss the term and field of instructional technology as defined by AECT. (c)
2. examine and discuss current research trends in the field of instructional technology. (c)
3. apply contemporary learning theory to the application of technology in the classroom. (c,lea,r)
4. to study and present individually selected issues in the field of instructional technology. (c,r)
5. to identify current and critical issues and/or controversies regarding the application of diverse technologies in classroom environments. To investigate a limited number of the same as class projects. (c,lea,r)
6. to develop the ability to organize and present information gathered from student investigations utilizing new technologies. (c,lea,r)

VIII. Course Outline:

1. The term and field of instructional technology. (2 weeks)
2. Examining current research in the field. On-line research Conventional literature reviews (2 weeks)
3. Examination of behavioristic learning theory as related to instructional technology. (2 weeks)
4. Examination of cognitive theory as related to instructional technology. (2 weeks)
5. Seminars: Individually selected issues. Group reports. (2 weeks)
6. Controversies in the application of technology. (2 weeks)
Copyright issues
Parental concerns
Curricular concerns
Administrative concerns
Economic concerns
Ethical concerns
7. Assessment Issues. (2 weeks)
Performance based assessments
Electronic portfolios
8. Individual reports, projects, presentations (2 weeks)

Sample Issues:

- Today, the public and the legislators have become increasingly concerned with young people on line and what they may view. This is tempered by groups like the ACLU who argue that any limiting on the Internet will infringe on an adult's right to view objectionable materials. The issue does not stop at pornographic materials, but also includes personal viewpoints [e.g. the KKK or the ACLU], information meant to help people [e.g. AIDS pages], religious pages [e.g. Christian or Islam pages], photographic sites [e.g. OFOTO], ultra-liberal or ultra-conservative sites [e.g. People for the American Way or the Eagle Forum]. This may be the hottest educational technology issue in the United States today. The issue is censorship and filtering in schools.

- Like most technology access issues, the first drawn into new technologies are usually white men, teens, and boys. Therefore, the industry appears to cater to that group with products, software, games, etc. This often leaves girls, minorities, the disabled, and, due to cost, the poor in untenable positions for getting jobs and advancing in the work place. This phenomenon is slowly changing for some, but not for all. The issue is equal technology access for all.
- Often schools have received funding through grants or bond referendums to purchase new technology for the classrooms. However, often little or no professional development is offered to the teachers on how to operate even the equipment, much less on how to use the technology in teaching. The general public sees these expenditures and is expecting the teachers to use the new equipment. Teachers complain that the technology is just one more thing for them to learn. Principals are looking to replace senior teachers with ones who use technology. They often equate a user of technology with one who can teach with technology. The issue is professional development for teachers.
- Teachers often do not know how to use effectively technology in teaching and learning. They often “plug student” into a drill/practice program and assume good things are happening. Allowing students to use the computer or access the Internet is sometimes used as rewards for the “good” students or the ones who finish their work first. Teachers also hear from the popular press that using technology does appear to help children achieve better. The issue is the integration of technology into the curriculum.

IX. Evaluation:

Use of technologies	25%
Presentations/demonstrations	10%
Research Paper	60%
Participation	<u>5%</u>
	100%

Syllabus Prepared By:

William Merrill (Name)



(Signature)

May 27, 2004 (Date)

X. **Bibliography**

WWW Resources:

APAStyle.org: <http://www.apastyle.org/>

APAStyle.org, Electronic References: <http://www.apastyle.org/electref.html>

APAStyle.org, Style Tips: <http://www.apastyle.org/styletips.html>

Owens Library APA Citation Style Examples: <http://www.nwmissouri.edu/library/citing/apa.htm>

OWL at Purdue University: Using APA Format: http://owl.english.purdue.edu/handouts/research/r_apa.html

Duke University: Citing Sources and Avoiding Plagiarism: Documentation Guidelines:

<http://www.lib.duke.edu/libguide/citing.htm>

Bartleby.com: Elements of Style: <http://www.bartleby.com/141/index.html>

Bartleby.com: Electronic References: <http://www.bartleby.com/reference/>

A Sample Paper According to the Publication Manual of the American Psychological Association:

<http://valencia.cc.fl.us/lrcwest/apaper.html>

APA Style Guide in PDF Format: <http://www.mlb.ilstu.edu/handouts/apaprint.pdf>

APA 5 Edition Guidelines in PDF format:

<http://www.uca.edu/divisions/academic/writing/OWL/LINKS/OnlineHandouts/apabasics.PDF>

Internet Articles:

Internet Guidelines and Culture by Arlene H. Rinaldi <http://www.fau.edu/netiquette/net/culture.html>

Don't Spread that Hoax <http://www.nonprofit.net/hoax/default.htm>

Effective Use of Computers with Young Children by Linda J. Burkhart

<http://www.lburkhart.com/lhandcomp.html>

Strategies and Applications for the One Computer Classroom <http://www.lburkhart.com/elem/strat.htm>

What We Are Learning About Early Learners and Augmentative Communication and Assistive Technology by Linda J. Burkhart <http://www.lburkhart.com/gphb.htm>

Piracy, Pornography, Plagiarism, Propaganda, Privacy: Teaching Children to Be Responsible Users of Technology Protects Their Rights and the Rights of Others

<http://www.computerlearning.org/articles/Ethics98.htm> Computer Learning Foundation Code of

Responsible Computing <http://www.computerlearning.org/RespCode.htm>

Computer Learning Foundation Emphasizes Responsible Use of Technology by Sally Bowman Alden

<http://www.computerlearning.org/articles/respmyth.htm> The Information Highway and Our Children by

Sally Bowman Alden & Alex Curyea <http://www.computerlearning.org/articles/InfoHwy.htm>

How Can We Dramatically Improve the Quality of Education through the Use of Computers and Related Technologies? by Frances Richardson <http://www.computerlearning.org/articles/Improve1.htm>

Technology Foundation Standards for All Students http://cnets.iste.org/students/s_stands.html

Educational Technology Foundations for All Teachers http://cnets.iste.org/teachers/t_stands.html

Michigan Entry Level Standard # 7 <http://www.ehhs.cmich.edu/~wmerrill/mistandard7.html>

Reinventing Schools:

- Preface <http://www.nap.edu/readingroom/books/techgap/navigate.cgi>
- The Nintendo Generation
- The Technology Juggernaut
- The Network Revolution
- Networking K-12 Education
- New Models for Education
- Systemic Reform
- Investing in Teachers
- Ensuring Equity

- Burgeoning Markets
- Opportunity to Change
- Learning about Learning

Social Issues on the Internet

Access Issues

Critical Issue: Ensuring Equitable Use of Education Technology by NCREL

<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te400.htm>

Technology and Equity by Delia Neuman <http://www.ericfacility.net/ericdigests/ed339400.html>

Teacher Education and Gender Equity by Jo Sanders <http://www.ericfacility.net/ericdigests/ed408277.html>

Women and Minorities in High-Tech Careers by Bettina Lankard Brown

<http://www.ericfacility.net/ericdigests/ed452367.html> Internet Access and Content for Urban Schools and

Communities by James M. Lonergan <http://www.ericfacility.net/ericdigests/ed446180.html> Making Web Sites Work for People with Disabilities by Andrea L. Foster

http://chronicle.com/free/v47/i21/i21_a03001.htm

With Accessibility for All by Chuck Moozakis <http://www.teledotcom.com/article/TEL20010119S0025>

Are Low-Income Schools Stalled on the Information Superhighway? http://www.cgs.edu/inst/trc_reach.html

The Digital Divide Persists in US by Michael Pastore

http://cyberatlas.internet.com/big_picture/demographics/print/0,1323,5901_1_5_8701,00.html

Speech Issues on the Internet

Should we Kill? Can we Kill the Messenger... <http://www.finew.com/archive/cults/>

Virtual Fuhrer by Curt Guyette <http://www.metroactive.com/papers/metro/08.08.96/net-nazis-9632.html>

Multiculturalism, Racism, and Hate Speech by Thelma McCormack

http://www.math.yorku.ca/ISR/newsletter/multi_racism_hate.htm

Government Censorship Trial Begins

http://www.eff.org/Legal/Cases/Multnomah_Library_v_US/20020322_eff_aclu_cipa_pr.html The

Lawless Internet by Mick Brady <http://www.ecommercetimes.com/perl/story/4026.html> Letter to the

Editor by Penelope Seator <http://www.ecommercetimes.com/perl/story/4026.html>

Pornography

Indecency On the Internet: Lessons from the Art World by Julie Van Camp

http://www.culb.edu/~7ej_vancamp/article_1.html

Cyberwire Dispatch II by Brock Meeks <http://www.ethics.ubc.ca/resources/computer/meeks.html>

OCAF White Paper on Internet Pornography <http://www.bway.net/~7edfenton/manifesto.html>

Enough-Is-Enough – Sharks <http://www.enough.org/sharks.htm>

Filtering

Campaign for Web Liberty by EFF

http://www.eff.org/Censorshjp/Ratings_filters_labelling/19990907_gilc_intl_ratings_statement.html

Speak freely, Act Responsibly http://pageturners.com/CDA/rs_1_st.htm

A quick review of the major points of the Responsible Speech Campaign:

http://pageturners.com/CDA/rs_pnts.htm

Study Outlines Safety Tips for Kids: Online study finds perpetrators are younger than you'd expect.

http://www.safekids.com/articles/ft_study.htm

Filtering Programs Useful but Far From Perfect <http://www.safekids.com/articles/filtering2000.htm>

Copyright and the Internet

A Brief Intro to Copyright by Brad Templeton <http://www.templetons.com/brad/copyright.html>
10 Big Myths about Copyright Explained by Brad Templeton <http://www.templetons.com/brad/copymyths.html>
Copyright Notice <http://www.benedict.com/info/notice/notice.asp>
Copyright Fair Use <http://www.benedict.com/info/fairUse/fairUse.asp>
Copyright Public Domain <http://www.benedict.com/info/publicDomain/publicDomain.asp>
Fair Use Guidelines for Educational Multimedia http://www.it.cmich.edu/it/policies_multi_fairuse.asp

Netiquette

Introduction to Network Etiquette <http://www.wabash.edu/technology/wabnet/netiquette.cfm>

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CENTRAL MICHIGAN UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES

Department of Teacher Education and Professional Development
Course Syllabus

EDU	708	Distance Education	3 (3-0)
Designator	Number	Course Title	Credit(Mode)

Title Abbreviation: DIST EDU

Bulletin Description: Students completing this course will be equipped to use distance learning technologies to teach in instruction settings.

Prerequisites: EDU 590, EDU 595

Textbooks and Other Required Materials to be Furnished by the Student:

No specific text is recommended. The instructor is encouraged to select diverse materials and compilations from the reference list and combine these resources with emerging literature on the topic.

Special Requirements of the Course:

Determined by the instructor.

General Methodology Used in Teaching the Course:

1. Technology based activities.
2. Cooperative learning exercises.
3. Projects and presentations.
4. Video tape, laser disc, CD ROM, and other media.
5. Distance learning via E Mail, internet access, or online services, or tutorials.
6. Research.
7. Readings.
8. Lecture and discussion.

Course Goals:

As a required course in the classroom applications of technology masters, this course seeks to help students understand that teaching with technology is *concept and knowledge driven, learner-centered, and relevant to multiple contexts and roles*. This course is designed to provide students with a theoretical and pragmatic understanding of technology based teaching and learning.

This course surveys the training and professional development issues in distance learning. Students who complete this course will be equipped to use distance learning technologies to teach in instructional situations. The course includes research in the area assessing distance learning curricula and considers recent research on two way interactive television.

Course Objectives:

- C- Concept- and knowledge-driven: A professional educational practice that is concept and knowledge- driven has, as its foundation, content knowledge. This knowledge base is acquired through serious study and developed through research.**
- LEA- LEArner centered: A professional educational practice that is learner-centered focuses on the cognitive, affective and physical needs, and characteristics of each learner. It is based on the belief that all learners grow and develop throughout life and that all students can learn.**
- R- Reflective practice relevant to diverse settings and roles:** Educators will work in diverse settings – from the large, urban high school to the small, rural school. Communities and schools are comprised of diverse people from a wide variety of cultural, ethnic, racial and socioeconomic backgrounds. Best educational practice requires recognition of and provisions for these differences.

After completing this course, the student will be able to:

1. List the factors that have accounted for the use of technology in distance education.
2. Distinguish between the concepts of telecommunication, distance learning, and two way interactive television.
3. Write a practical distance learning plan for an instructional situation.
4. Discuss the challenges of evaluation and assessment in applications of distance learning.
5. Describe two or more educational models which demonstrate innovative distance learning technologies.
6. Utilize distance learning technology to teach in an instructional situation.

Course Outline:

- I. Defining the term and field of distance learning. (1 Week)
- II. Considering factors which have accounted for the use of technology in distance learning. (1 Week)
- III. Lesson Planning. Developing effecting technology based distance learning plans. (2 weeks)
- IV. Reviewing research on the evaluation and assessment models of distance learning scenarios. (2 weeks)
- V. Distance learning projects. Formulating plans based upon a review of distance learning models. (4 Weeks)
- VI. Practice teaching. Utilizing distance learning plans in real or mock teaching trials. (3 Weeks)
- VII. Challenges in distance education. training legalities reformatting course content support marketing receptivity (3 Weeks)

Evaluation:

Studio activities	25%	
Projects		30%
Presentations/demonstrations		10%
Lesson plans/tests/examinations		30%

Involvement/participation 5%

Syllabus Prepared By:

William L. Merrill (Name)



(Signature)

April 2002 (Date)

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CENTRAL MICHIGAN UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES

Department of Teacher Education and Professional Development
Course Syllabus

EDU	709	Innovative Uses of Technology	3 (3-0)
Designator	Number	Course Title	Credit(Mode)

Title Abbreviation:

Bulletin Description: A survey of new and innovative applications of technology in educational settings. Students study and develop innovative instructional models utilizing technology.

Prerequisites: EDU 590

Textbooks and Other Required Materials to be Furnished by the Student:

No specific text is recommended. The instructor is encouraged to select diverse materials and compilations from the reference list and combine these resources with emerging literature on the topic.

Special Requirements of the Course:

Determined by the instructor.

General Methodology Used in Teaching the Course:

1. Technology based activities.
2. Cooperative learning exercises.
3. Projects and presentations.
4. Video tape, laser disc, CD ROM, and other media.
5. Distance learning via E Mail, internet access, or online services, or tutorials.
6. Research.
7. Readings.
8. Lecture and discussion.

Course Goals:

As a required course in the classroom applications of technology masters, this course seeks to help students understand that teaching with technology is concept and knowledge driven, learner-centered, and relevant to multiple contexts and roles. This course is designed to provide students with a theoretical and pragmatic understanding of technology based teaching and learning.

Course Objectives:

- C- Concept- and knowledge-driven: **A professional educational practice that is concept and knowledge- driven has, as its foundation, content knowledge. This knowledge base is acquired through serious study and developed through research.**

- LEA- LEArner centered: **A professional educational practice that is learner-centered focuses on the cognitive, affective and physical needs, and characteristics of each learner. It is based on the belief that all learners grow and develop throughout life and that all students can learn.**

- R- **Reflective practice relevant to diverse settings and roles:** Educators will work in diverse settings – from the large, urban high school to the small, rural school. Communities and schools are comprised of diverse people from a wide variety of cultural, ethnic, racial and socioeconomic backgrounds. Best educational practice requires recognition of and provisions for these differences.

After completing this course, the student will be able to:

1. Identify three educational prototypes utilizing technology in education.
2. Summarize innovative educational applications of technology in K-12 school districts nationally.
3. Define individualized instruction as it relates to key education technology initiatives.
4. Illustrate examples wherein innovative models of instruction have improved teacher/student effectiveness.
5. Illustrate examples wherein innovative models of instruction have improved parent/teacher/student effectiveness.
6. Discuss the import of Project CHILD.
7. Explain the Model T multimedia prototype.
8. Summarize the case study: University of Minnesota at Duluth: Video Disc Technologies - An Instructional Model.
9. Define a technology and develop a model for its innovative application for school or district.

Course Outline:

Weeks 1-3: National survey of innovative, technology based educational models. Provide students with research leads and literature references for group investigations. Assign research topics.

Weeks 4-6: Students work cooperatively and investigate the literature as it relates to innovative educational applications of technology in education. Report during weeks 10-11.

Weeks 7-9: Instructor leads group in reviewing models that have demonstrated increased effectiveness in student/teacher and parent/student/teacher effectiveness.

Investigate the successes and failures of related case studies. Students draft ideas for personal project models. Demonstrate models during weeks 12-13.

Weeks 10-11: Student research presentations.

Weeks 12-13: Demonstration of personal models.

Weeks 14-16: Project CHILD and MODEL T case studies. Exam topics assigned.

Evaluation:

Research	25%
Projects /models	30%
Presentations/demonstrations	10%
Tests/examinations	30%
Involvement/participation	5%

Syllabus Prepared By:

William L. Merrill

(Name)



(Signature)

April 2003 (Date)

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Innovative Uses of Technology by a Number of Government Agencies [a PDF document (2002)]
<http://www.gartner.com/resources/110700/110754/110754.pdf>.

SITE position paper: Statement of basic Principles and suggested actions: <http://www.aace.org/site/SITEstatement.htm>

W3: <http://www.w3.org/>

W3 Accessibility Initiative: <http://www.w3.org/WAI/>

An Innovation Odyssey: <http://www97.intel.com/odyssey/index.asp>

Intel Innovation in Education Web Site: http://www.intel.com/education/projects/contributions/web_site.htm

HP Case Studies: <http://government.hp.com/casestudies.asp?agencyid=135&am=0>

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