

COURSE SYLLABUS
SOUTHEAST MISSOURI STATE UNIVERSITY

THE TEACHER AS A COMPETENT PROFESSIONAL EDUCATOR

Department of Secondary Education

Course No. SE 600

Course Title: Multimedia in Education

New: Spring 1998

I. Catalog Description and Credit Hours of Course:

This a product-oriented course that examines the role of a variety of media sources in the classroom. Working with sound, photos, and video to design multimedia presentations will be a focal point of the course, and the integration of multimedia productions to in the content curriculum will be addressed. (3)

II. Prerequisite(s):

None

III. Purposes or Objectives of the Course:

The participants will:

- A. Examine instructional design as they relate to multimedia.
- B. Read and discuss literature describing the evolution of computers in the classroom.
- C. Investigate available World Wide Web sites that can be used as resources to enhance the content curriculum, including freeware and shareware sites for educators.
- D. Build multimedia presentations for use in the classroom.
- E. Examine limitations of using computers in the classroom, including hardware and software limitations.

IV. Expectation of Students:

- A. To read and discuss literature examining technology integration in the schools.
- B. To examine the basic instructional design features of effective multimedia presentations.
- C. To participate, individually and in groups, in activities to build multimedia presentations that incorporate a variety of video materials, scanned images, sound and other reference materials to supplement the content curriculum.
- D. To examine and evaluate commercial multimedia programs available as supplements to instruction.

- E. To write a research paper examining one element of multimedia (sound, images, color, etc.) and its impact on learning.

V. Content:

A. Changing Roles for the Teachers: 9

Moving from the Industrial to the Information Age

1. Discussion: National and Regional Implications
2. Computers in the Classroom: What's Working, What's Not--
A Review of the Literature.
3. Review of commercial software programs.

B. Storyboards and Writing Objectives: 9

1. Review of writing learning objectives
2. Introduction to storyboarding
3. Discussion: The Importance of Planning in Multimedia
4. Guided Practice: Building Content-Directed Presentations in PowerPoint

C. Screen Design and Learning: 12

1. Research review: Impact of color and graphics on learning
2. Discussion: Selecting and Designing Effective Graphics
3. Using Projection Instruments to Display Presentations
4. Basic Instructional Design

D. Working with Images and Sound: 15

1. Using Authoring Programs
2. Importing Text and Graphing from Other Applications
3. Accessing Information On-Line
4. Downloading Text and Images from the World Wide Web
5. Using Image Editors
6. Using Projection Panels for Whole-Class Instruction

Total Hours: 45

VI. Textbook(s):

TBA

VII. Evaluation:

- A. Attendance and participation.
- B. Multimedia software development.
- C. Article reviews.
- D. Software evaluations.
- E. Midterm and final examination
- F. Research paper.

VIII. Knowledge Base:

- Aspillage, M. (1991). Screen design: Location of information and its effects on learning. *Journal of Computer-Based Instruction*, 18, 89-92.
- Back, Y.K., & Layne, B.H. (1988). Color, graphics and animation in a computer assisted learning tutorial lesson. *Journal of Computer-Based Instruction*, 5, 131-135.
- Barrett, Edward, ed. (1992). *Sociomedia: Multimedia, Hypermedia, and the Social Construction of Knowledge*. Cambridge, MA: MIT Press.
- Cartwright, G.P. (Nov/Dec 1993). Teaching with dynamic technologies. *Change*, 25(6), 67-70.
- Cates, Ward Mitchell (1992). "Considerations in Evaluating Metacognition in Interactive Hypermedia/Multimedia Instruction." Annual Conference of the American Educational Research Association. San Francisco. 20-24 Apr. 1992. ERIC, ED 349 966.
- ChanLin, L. J. (1994). A theoretical analysis of learning with graphics implications for computer graphics design. (ERIC doc. no.ED370526).
- Chao, T.M.; Cennamo, K.S. & Bruanlich, E.A. (1996) The effects of graphics in computer-assisted instruction for teaching rules. *International Journal of Instructional Media*, 23(1), 41-52.
- Cohen, P. (1994). The On-Line Classroom. *ASCE Update*, 36(10), 1-6.
- Conroy, M. (1994). TECH TRAUMA-The technology teacher's syndrome. *Tech Directions*, December, 38-39.
- Dyril, O.E. & Kinnaman, D.E. (1994). Preparing for the integration of emerging technologies. *Technology and Learning*, May/June, 92-98.
- Gagne, R.M., & Briggs, L.J. (1979). *Principles of instructional design* (2nd ed.). New York: Holt, Rinehart, and Winston.
- Kanner, J.H. (1968). The instructional effectiveness of color in television: A review of the evidence. Stanford, CA: Stanford University.(ERIC ED 015 675).
- Kinnaman, D.E. (1994). What it really means to integrate technology. *Technology and Learning*, May/June, 130.
- Kozma, R.B. (1991). Learning with media. *Review of Educational Research*, 61, 179-211.
- Jonassen, D.H., & Hannum, W.C. (1987, December). Research-based principles for designing computer software. *Instructional Technology*, 7-14.
- Litchfield, Brenda C. (1993). "Design Factors in Multimedia Environments: Research Findings and Implications for Instructional Design." Annual meeting in the American Educational Research Association. Atlanta, 12-16.
- Murch, Gerald M. (1985). "Using Color Effectively: Designing to Human Specifications." *Technical Communication*, 32(4), 14-20.

- Pressley, G.M. (1988). Imagery and children's learning: Putting the picture in developmental perspective. *Review of Educational Research*, 47, 585-622.
- Riding, R., and Sadler-Smith, E. (1992). Type of instructional material, cognitive style, and learning performance. *Educational Studies*, 18 (3), 323-329.
- Rysavy, D.M., and G.C. Sales (1991). Cooperative Learning in Computer-Based Instruction. *Educational Technology Research and Development* 39(2), 70-79.
- Saloman, G. (1996). Multimedia and hypermedia CBI. *Journal of Business & Technical Communication*.

Southeast Missouri State University
 College of Education
 Conceptual Framework for the Preparation of Teachers

