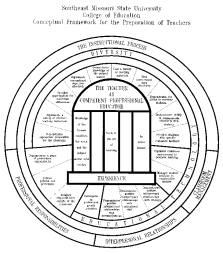
COURSE SYLLABUS

SOUTHEAST MISSOURI STATE UNIVERSITY



Department of Secondary Education **Course No.** SE360
Course: Integrating Technology into the Content Areas **New:** Sp 99

"The Teacher As Competent Professional Educator"

I. Catalog Description and Credit Hours of Course:

This class will explore the integration of technology into specific subject areas, including communication arts, mathematics, social studies, science, physical education, music and art, in the school. (3)

II. Prerequisite(s):

EL210 Integrating Technology into the Classroom

III. Purposes or Objectives of the Course:

By the end of the course, the student will have demonstrated acquisition of the knowledge base and skills necessary to:

A. Describe and demonstrate examples of technology integration into the language arts class.

B. Describe and demonstrate examples of technology integration into the mathematics class.

C. Describe and demonstrate examples of technology integration into the social studies classroom.

D. Describe and demonstrate examples of technology integration into the science classroom.

E. Describe and demonstrate examples of technology integration into the special classes.

F. Describe and demonstrate examples of technology integration into dance, music, theater, and the visual arts.

G. Describe and demonstrate examples of technology integration into vocational education.

IV. Expectations of Students:

A. Students will complete all assigned readings in textbook, handouts and relevant professional journal articles.

B. Students will participate in classroom discussions and activities.

C. Students will demonstrate achievement of course objectives through exams and projects.

D. Students will use instructional technology to develop class-assigned projects.

V. Content or Outline: **Hours**

A. Designing learning activities using technology — 6
   1. Mastery learning
   2. Conditions of Learning
   3. Constructivism
   4. Multiple Intelligences

B. Choosing appropriate media and materials — 6
   1. Content
   2. Tools, such as appropriate instructional packages, word processing, spreadsheet, database and/or telecommunications
   3. Activities
   4. Learning environments

C. Using teacher-centered technology and student-centered technology lessons — 3

D. Designing literacy lessons with technology integration — 6

E. Designing problem-solving lessons with technology integration — 9
   1. Science
   2. Math
   3. Social Studies
   4. Dance, music, theater, and the visual arts
   5. Communication arts
   6. Special education
   7. Vocational education

F. Designing lessons to teach information using technology — 6
   1. Science
   2. Math
   3. Social Studies
   4. Dance, music, theater, and the visual arts
   5. Communication arts
   6. Special education
   7. Vocational education

G. Using technology for assessment. — 6

H. Designing the classroom for technology — 6

VI. Textbook(s) and/or Other Required Materials or Equipment:

Deschberg, P. & Fisher, F. (1998). *Teaching with technology, 2nd ed.* [Computer software]. Needham Heights, MA: Allyn & Bacon.

Norton P. & Wiburg, K. (1998). *Teaching with technology.* Orlando, FL: Harcourt, Brace & Co.

VII. Basis for Student Evaluation:

A. Basic competency demonstration in use of technology, including appropriate software and hardware.

B. Three written tests.

C. Technology-infused lesson plans that include appropriate instructional software, tools such as word processing, spreadsheet, database, and/or telecommunications.

VIII. Knowledge Base:

Ames, S., Angle, M., Brubaker, S., Mahan, J., Marchand, D., Walker, E., O'Neil, S., & Pappal, M. (1995). *Teaching electronic information skills: A resource guide for grades K-5.* McHenry, IL: Follett Software Co.

Anderson, C. & McMahan, G. (in press). Storybook CD-ROMs for bibliotherapy. *Intervention in School and Clinic.*

Balajthy, E. (1988). Keyboarding, language arts, and the elementary school child. *The Computing Teacher, 15* (5), 40-43.

Bangert-Drowns, R. (1993). the word processor as an instructional tool: A meta-analysis of word processing in writing instruction. *Review of Educational research, 63*(1), 69-93.

Barrett, H. (1994). Technology-supported assessment portfolios. *The Computing Teacher, 21*(6), 9-12.

Bennett, S. & Bennett, R. (1993). *The official Kid Pix activity book.* New York: Random House.

Bearden, D. & Martin, K. (1998). My Make-Believe Castle: An epic adventure in problem solving. *Learning and Leading with Technology, 25*(5), 21-25.

Bradley, C. & Taylor, L. (1992). Teaching mathematics with technology: The four directions Indian beadwork design with Logo. *The Arithmetic Teacher, 39*(9), 46-49.

Bransford, J., Sherwood, R., Hasselbring, T., Kinzer, C. & Williams, S. (1990). Anchored instruction: Why we need it and how technology can help. In Nex, D. & Spiro, R. (eds) *Cognition, education and multimedia: Exploring ideas in high technology* (pp. 115-141). Hillsdale, NJ: Erlbaum.

Brooks, J.G. & Brooks, M.G. (1993). *In search of understanding: The case of constructivist classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.

Brunner, C., & Tally, B. (1994). Teaching visual literacy. *Electronic Learning 14*(3), 16-17.

Chan, B. (1993). *Kid Pix around the world: A computer and activities book.* Reading, MA: Addison-Wesley.

Craig, D.V. & Stewart, J. (1997). Mission to Mars - A collaborative project infusing technology and telecommunications into the curriculum. *Learning & Leading with Technology, 25*(2), 22-27.

Dudley-Marling, C. & Owston, R.D. (1988). Using microcomputers to teach problem-solving: A critical review. *Educational Technology, 28*(7), 27-33.

Freedman, K. & Relan, A. (1990). The use of applications software in school: Paint system image development processes as a model for situated learning. *Journal of Research on Computing in Education, 23*(1), 101-113.

Grabe, M. (1992). Learning in technology enriched study environments: Will students study effectively? *Reading and Writingj Quarterly, 8*(1992), 321-336.

Haren, I. & Papert, S. (1990). Software design as a learning environment. *Interactive Learning Environments, 1*(1990), 1-32.

Hartson, T. (1993). Kid-appeal science projects. *Computers in Education, 20*(6), 33-36.

Hemmer, J. Melissa's year in sixth grade: A technology integration vignette. *Learning and Leading with Technology, 25*(5), 11-15.

Higgins, C. (1997). Update your language lab! Better tools and new technologies jump-start foreign-language learning. *Electronic Learning, 16*4), 18-20.

Hill, M., Manzo, E., Liberman, D., York, J., Nicols, C., & Morgan, P. (1988). Let's bring computers into the classroom. *Educational Technology, 28*(5), 46-48.

Holzberg, C. (1998). Exploring world cultures. *Technology and Learning, 16*(6), 8-12.

Holzberg, C. (1997). The right stuff for young writers: A diverse collection of programs to develop kids' written expression. *Electronic Learning 16*(6), 30-37.

Jonassen, D.H. (1996). *Computers in the classroom: Mindtools for critical thinking.* Englewood Cliffs, NJ: Merrill.

Lockard, J., Abrams, P., & Wesley, A.M. (1997). *Microcomputers for the twenty-first century educators, 4th ed.* New York: Longman.

Lynch, M. & Walton, S. (1998). Talking trash on the Internet: Working real data into your classroom. *Learning and Leading with technology, 25*(5), 26-31.

Moersch, C. (1995). Levels of technology implementation (LiTI): A framework for measuring classroom technology use. *Learning and Leading with technology, 23*(3), 40-42.

Quesada, A. (1998). A new generation of scientists. *Technology and Learning, 16*(6), 18-21.

Quesada, A. & Lockwood Summers, S. (1998). Literacy in the cyberage: Teaching kids to be media savvy. *Technology and Learning, 18*(5), 30-36.

Schipper, D. (1991). Practical ideas: Literature, computers, and students with special needs. *The Computing Teacher, 19*(2), 33-37.

Tan, S.B. (1998). Making one-computer teaching fun. *Learning and Leading with Technology, 25*(5), 6-10.

Viau, E.A. (1998). color me a writer: teaching students to think critically. *Learning and Leading with Technology, 25*(5), 17-20.

Wales, C. (1995). Paving inroads for technology integration - a classroom example. *Learning and Leading with Technology, 23*(2), 41-42.

Widmer, C. & Sheffield, L. (1998). Modeling mathematics concepts. *Learning and Leading with Technology, 25*(5), 32-35.

Weibe, J. (1992). Word processing, desktop publishing, and graphics in the mathematics classroom. *The Computer Teacher, 19*(5), 39-40.