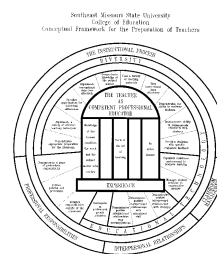


COURSE SYLLABUS

SOUTHEAST MISSOURI STATE UNIVERSITY

Department of Secondary Education
Course: Introduction to Instructional Design

Course No. SE260
New: Sp 99



“The Teacher As Competent Professional Educator”

I. Catalog Description and Credit Hours of Course:

This class will explore the design and development of computer-assisted instruction for classrooms. (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 the knowledge base and skills necessary to:

- A. Describe the various types of computer-assisted instruction (CAI), including tutorials, drill and practice, simulations, educational games, tools, and CD-ROM storybooks.
- B. Describe the steps needed to plan CAI, including selection of topic, selection of subject matter, planning for audience, generating goals and objectives, and planning evaluation.
- C. Describe the guidelines to planning the instructional treatment used in CAI.
- D. Describe and design the types of evaluation used in CAI, including formal, informal, formative, and summative.
- E. Describe and demonstrate an understanding of the basics of screen design, including instructional factors and tools for generating screen components.
- F. Describe and demonstrate examples of instructional interaction, including effective questioning techniques.
- G. Describe and use of features in the hardware and software that lead to effective instruction.
- H. Write effective directions for the instructional software.

IV. Expectations of Students:

Students will:

- A. Complete all assigned readings in textbook, handouts and relevant professional journal articles.
- B. Participate in classroom discussions and activities.
- C. Demonstrate achievement of course objectives through exams and projects.
- D. Use instructional technology to develop class-assigned projects.

V.	Content or Outline:	Hours
A.	History and current use of computer-assisted instruction	3
B.	Applications of computer-assisted instruction	3
	1. Tutorials	
	2. Drill and practice	
	3. Simulations	
	4. Educational games	
C.	Initial planning of the instructional design	6
	1. Choosing the topic and analyzing the content	
	2. Analyzing the intended audience	
	3. Formulating appropriate goals and objectives	
	4. Generating evaluation measures.	
D.	Developing instructional treatment	6
	1. Events of instruction	
	2. Interactivity	
	3. Flowcharting	
	4. Storyboarding	
	5. Draft	
E.	Designing Evaluation	6
	1. One-to-one evaluation	
	2. Small-group evaluation	
	3. Field-test evaluation	
F.	Using effective screen design techniques	6
	1. Common components	
	2. Directions and learner responses	
	3. Error messages	
	4. Text and graphic areas	
	5. Display components	
	6. Layout	
	7. Visuals	
G.	Interactivity	6
	1. Personalizing the lesson	
	2. Feedback	
	3. Questioning	
	4. Learner input	
H.	Hardware and software components in instructional design	3
	1. Input devices	
	2. Authoring languages	
	3. Hypermedia	
	4. Integrated software	
I.	Writing effective directions	6
	1. Teacher documentation	
	2. Learner documentation	
	3. Technical documentation	

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

Price, R.V. (1991). *Computer-aided instruction, A guide for authors*. Pacific Grove, CA: Brooks/Cole Publishing Co.

VII. Basis for Student Evaluation:

- A. Basic competency demonstration in use of a variety of technologies.
- B. Three written tests.
- C. Interactive computer program demonstrating good principles of instructional design.

VIII. Knowledge Base:

Alessi, S. & Trollip, S. (1991). *Computer-based instruction: Methods and development (2nd ed.)*. Englewood Cliffs, NJ: Prentice-Hall.

Alessi, S. (1988). Fidelity in the design of instructional simulations. *Journal of Computer-Based Instruction*, 15(2), 40-47.

Apple Computer (1989). *Hypercard stack design guidelines*. Reading, MA: Addison-Wesley.

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

Burton, J.K. & Merrill, P.F. (1991). Needs assessment: Goals, needs and priorities. In L.J. Briggs, K.L. Gustafson, & M.H. Tillman (Eds.), *Instructional design: Principles and applications, 2nd ed.*, (pp. 17-43). Englewood Cliffs, NJ: Educational Technology Publications.

Dick, W. & Carey, L. (1996). *The systematic design of instruction*. New York: HarperCollins College Publishers.

Dyrli, O.E. (1996). Technology planning with online resources. *Technology and Learning*, 16(6), 16.

Garcia, R.L. (1991). *Teaching in a pluralistic society: Concepts, models, and strategies*. New York: HarperCollins.

Gronlund, N.E. (1985). *Stating behavioral objectives for classroom instruction*. New York: Macmillan.

Harel, I. (1991). *Children as designers*. Norwood, NJ: Ablex.

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

Heinrich, R., Molenda, M., Russell, J., & Smaldino, S. (1996). *Instructional media and technologies for learning (5th ed.)*. Englewood Cliffs, NJ: Prentice-Hall.

Jonassen, D.H. & Grabowski, B.L. (1993). *Handbook of individual differences, learning, and instruction*. Hillsdale, NJ: Erlbaum.

Jonassen, D., Hannum, W., & Tessmer, M. (1989). *Handbook of task analysis procedures*. New York: Praeger.

Kaufman, R., Rojas, A.M., & Mayer, H. (1993). *Needs assessment: A user's guide*. Englewood Cliffs, NJ: Educational Technology Publications.

Kearns, D.T. & Anderson, J.L. (1997). *Bold new plans for school restructuring: The New American Schools Development Corporation design*. Mahwah, NH: Erlbaum.

Mager, R.F. (1984a). *Preparing instructional objectives (2nd ed.)*. Belmont, CA: Pitman.

Mager, R.F. (1984b). *Goal analysis (2nd ed.)*. Belmont, CA: Lake.

Merrill, M.D. (1983). Component display theory. In C.M. Reigeluth (Ed.), *Instructional design theories and models: An overview of their current status* (pp. 282-333). Englewood Cliffs, NJ: Erlbaum.

Novelli, J. (19978). Quick-and-easy Web pages. *Electronic Learning*, 16(4), 56-57.

Reigeluth, C.M. (1987). Lesson blueprints based on the elaboration theory of instruction. In C.M. Reigeluth (Ed.), *Instructional theories in action: Lessons illustrating selected theories and models*. Hillsdale, NJ: Erlbaum.

Ross, S.M. & Morrison, G.R. (1995). Evaluation as a tool for research and development. In R.D. Tenneson & A. Barron (Eds.), *Automating instructional design: Computer-based development and delivery tools* (pp. 491-522). Berlin: Springer-Verlag.

Schraw, G., Wade, S.E., & Kardash, C.A. (1993). Interactive efforts of text-based and task-based importance on learning from text. *Journal of Educational Psychology*, 85, 652-661.

Shemuel, B. & Keller, J. (1998). Look sharp: Timps for Web design and graphics. *Technology and Learning*, 18(6), 30-34.

Sherman, G.P. & Klein, J.D. (1995). The effects of cued interaction and ability grouping during cooperative computer-based science instruction. *Educational Technology Research and Development*, 43(4), 5-24.

The value of training. (1995). [On-line]. Available at: <http://tidbit.fhda.edu/BII/NewsNotes.html>

Terry, R.V. & Howard, J. (1996). [On-line]. *A systems approach and instructional design principles: Two critical elements for effective WWW courseware development*. Available at: <http://www.uvm.edu/~hag/naweb96/abstracts/a-howard.html>.

Turoff, M. (1996). [On-line]. *Designing a virtual classroom*. Available at: <http://www..njit.edu/njit/department/CCCC/VC/Papers/Design.html>.

Weinstein, P. (1998). Web publishing comes of age. *Technology and Learning* 18(6), 25-29.