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C&I 570.01: Instructional Technology Foundations

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C & I 570: Instructional Technology Foundations
Fall, 2002

Dr. Sally Brewer   Office Hours:
Office: EDUC 101   Tues., 3:00 – 5:00 p.m.
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Course Time and Location: Mondays, 4:10 - 7:00 p.m., ED 113

Course Description: This course is designed to provide students with an overview of the learning theories and instructional design models that form the foundation of instructional technology. Having knowledge about the foundations, history, and the literature in the field enables students to think more critically about their projects. Topics included in this course are: foundations, history, ISD models, issues, and current trends. A foundation will be laid which you will use when you design, develop, implement and evaluate instructional media during the spring semester.

Objectives:
By the end of the semester, the students will be able to:
- Understand the foundations and history of educational technology
- Identify major resources, organizations, and people in the field of educational technology
- Become familiar with a wide variety of literature related to educational technology
- Become familiar with a variety of Instructional Systems Design (ISD) models

Recommended:

American Psychological Association. (2001). Publication manual of the American Psychological Association. (5th ed.) Washington, DC: American Psychological Association.

Bibliography of selected resources:

Anglin, G. J. (1995). Instructional technology: Past, present, and future (2nd ed.). Englewood, CO: Libraries Unlimited.

Cognition and Technology Group at Vanderbilt. (1999). Technology for teaching and learning with understanding: A primer. Boston: Houghton Miflin.

Dick, W. and Carey, L. (2001). The systemic design of instruction. (5th Ed.) New York: Harper Collins.

Gagne, R. M., Briggs, L. J., & Wager, Walter W. (1992). Principles of instructional design. (4th ed.). Fort Worth: Harcourt Brace Jovanovich.

Heinich, R., Molenda, M., Russell, J. D. & Smaldino, S. E. (2002). Instructional media and technologies for learning (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Jonassen, D., Peck, K. & Wilson, B. (1999). <u>Learning with technology: A constructivist approach</u>. Upper Saddle Brook, NJ: Prentice Hall.

Saettler, P. (1990). <u>The evolution of American educational technology.</u> Englewood, CO: Libraries Unlimited.

Seels, B.B. & Richey, R. C. (1994). <u>Instructional technology: The definition and domains of the field</u>. Washington, D.C.: Association for Educational Communications and Technology.

Seels, B. B. & Glasgow, Z. (1998). <u>Making instructional design decisions</u>. Upper Saddle Brook, NJ: Prentice Hall.

Smith, P. L. & Ragan, T. J. (1999). <u>Instructional design</u>. (2nd ed..) Upper Saddle Brook, NJ: Prentice Hall.

Simonson, M. & Thompson, A. (1997). Educational computing foundations. Upper Saddle Brook, NJ: Prentice Hall.

Course Content:
<u>Topics</u>
Behaviorists: B. F. Skinner, Thorndike, and Computer assisted instruction
Jean Piaget
Jerome Bruner
Lev Vygotsky
Benjamin Bloom
David P. Ausubel
Robert M. Gagne
Seymour Papert
John Dewey: Experiential learning
David Jonassen & Constructivism
CTGV and anchored instruction

<u>Technology initiatives</u>
Key Building Blocks for Student Achievement in the 21st Century
http:://www.ceoforum.org

e-Learning: Putting a World- Class Education at the Fingertips of all children
http://www.ed.gov/Technology/index.html

No Child Left Behind
http://www.ed.gov

<u>Technology Standards</u>
MT student standards
NETS for students
NETS for teachers
NETS for administrators

Evaluation:

Evaluation will occur on a continuing basis throughout the semester. Students are expected to attend all classes and participate in classroom activities. Assignments must be turned in on time and in a professional format. They are weighed as follows:

Class attendance and participation	10%	90 -100%	A
Reports	60%	80 - 89%	B
Exams	<u>30%</u>	70 - 79%	C
	100%	60 – 69%	D
		Below 60	F

Reports

Report 1. (20 %) – Decade of history
   Instructional technology development
      Societal and Political influences
      What happened in schools

Report 2. (20 %)– Theorist
      Prepare an annotated bibliography of the theorist's writings to be distributed when you give your report.
      Present information about your person's theories and how they impacted field of instructional technology.
      Lead discussion on theory

Report 3. (10%) – Instructional System model - Find at least two Instructional systems design models. Compare and contrast. Develop your own model and justify each component.

Report 4. (10%) – Impact of external stakeholders on the field (e.g., CEOforum, Congress, etc.)

Bibliographies should be in APA style. Use technology when you present your reports.

Other pertinent information

Class attendance is mandatory. More specific information on class assignment and expectation for those assignments will be part of each class period. In case you miss a scheduled class, you should contact someone in the class for work missed.

C & I 570
Dynamic Syllabus

Date	Topic	Assignment
9/4	Introductions Course Overview	
9/9	Educational Technology Foundations	
9/16	History of Instructional Technology	5 page paper on "your" decade 50 (MC), 60(SG), 70(HF), 80(AM)
9/23	Behaviorists: Thorndike, Skinner, Bloom	
9/30	Cognitivists: Bruner, Ausubel, Gagne	
10/7	Constructivism and Anchored Instruction: Jonassen, CTGV	
10/14	Learning and Development: Piaget, Vygotsky, and Papert	Attend at least one presentation at MEA or MCEL. Write a reflection paper on the role of educational technology in K-12 schools.
10/21	Midterm	
10/28	Experiential Learning: John Dewey	
11/4	Instructional Design models	Find 2 ISD models on web or print– compare and contrast. Create your own.
11/11	Holiday	Learning styles (self exams) Bernice McCarthy's 4Mat
11/18	Technology and learning in "Virtual worlds" - building communities, providing tech support, library services	
11/25	Thanksgiving - No class	
12/2	Politics and Instructional Technology Is teaching with technology that different? Can we provide alternative routes to teacher certification with the help of technology?	Report on 1 technology initiative & 1 set of standards
12/9	Assessing Technology's Impact Is the expense of technology justifiable when school budgets are so tight?	
12/16	Beethoven's Birthday	Final