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# Educational Technology

In the College of Education

**OFFICE: North Education 280**  
**TELEPHONE: (619) 594-6718**  
**FAX: (619) 594-6376**

## Faculty

Donn C. Ritchie, Ph.D., Associate Professor of Educational Technology, Chair of Department  
Brockenbrough S. Allen, Ph.D., Professor of Educational Technology  
Bernard J. Dodge, Ph.D., Professor of Educational Technology  
Allison Rossett, Ed.D., Professor of Educational Technology  
Farhad Saba, Ph.D., Professor of Educational Technology  
Robert P. Hoffman, Ph.D., Associate Professor of Educational Technology  
Marcie J. Bober, Ph.D., Assistant Professor of Educational Technology

## Courses Acceptable on Master's Degree Program in Education

### UPPER DIVISION COURSES

#### **532. Production of Instructional Materials (3) I, II**

Six hours of activity.

Instructional media production for professionals in organizational settings such as hospitals, law offices, accounting firms, publishing companies. Use of videotape, laser disc, multi-image and digital telecommunications for training. Not open to students in educational technology degree and certificate programs or to students with credit in Educational Technology 541.

#### **540. Educational Technology (3) I, II, S**

Six hours of activity.

Rationale, foundations, theories, careers, trends, and issues in educational technology. Implications of educational technology for instruction and information in schools, government, and corporations.

#### **541. Multimedia Development (3) I, II, S**

One lecture and six hours of laboratory.

Prerequisite: Basic computer literacy and elementary knowledge of an authoring system.

Systems, aesthetic, and learning theories applied to design of educational multimedia. Use of authoring systems to plan and prototype. Not open to students with credit in Educational Technology 532.

#### **544. Instructional Design (3) I, II**

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 540 and 541. Pass GRE Writing Assessment Test or complete Rhetoric and Writing Studies 503W with a grade of B+ or better.

Systematic design of products for education and training. Use of cognitive task analysis to determine instructional content. Development of instructional goals and product specifications. Rapid prototyping of instructional products.

#### **561. Advanced Multimedia Development (3)**

Six hours of activity.

Prerequisites: Educational Technology 540 and 541.

Research-based guidelines, design languages and object-oriented thinking applied to development of media-based learning systems. Two- and three-dimensional graphics, animation, video, sound, and virtual reality techniques.

#### **570. Advanced Teaching with Technologies (3)**

Prerequisite: Educational Technology 470.

Design of constructivist lessons and units using Internet resources. Use of visual organizing tools and databases for instruction and assessment. Tools for professional knowledge base organization and electronic portfolios.

#### **572. Technology for Course Delivery (3) I, II**

One lecture and six hours of laboratory.

Prerequisite: Educational Technology 541.

Use of technology to support planning, presenting and managing instructor-led courses.

#### **596. Topics in Educational Technology (1-3)**

Selected problems in educational technology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES

#### **640. Psychology of Technology-Based Learning (3)**

Six hours of activity.

Prerequisite: Educational Technology 544.

Principles of human learning and cognition applied to design and use of technology-based learning systems. Development of research-based design guidelines. Media as channels for educational communications and as environments for learning by doing.

#### **644. Advanced Instructional Design (3)**

Two lectures and three hours of laboratory.

Prerequisites recommended: Educational Technology 540 and 544.

Roles and theories associated with instructional design. Problem solving on current design issues. Needs assessment and product development for community based clients.

#### **650. Distance Education (3)**

Two lectures and three hours of laboratory.

Prerequisite: Educational Technology 561. Recommended: Educational Technology 572.

Theories and models of tele-education at home, place of work and school. Design, development, and evaluation of instructor-led and learner-directed tele-lessons for integrated electronic dissemination systems. Social, economic and organizational context of learning at a distance.

**653. Multimedia and Hypermedia (3)**

One lecture and six hours of laboratory.

Prerequisite: Educational Technology 561.

Design and analysis of educational multimedia as dynamic systems. Synthesis of art, drama, and music within framework of learning theory.

**670. Exploratory Learning Through Simulation and Games (3)**

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 540 and 541.

Design, evaluation and use of simulations and games for education and training. Instructional applications of computer-based simulations, interactive fiction, board games and role play.

**671. Instructional Multimedia (3)**

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 544 and 561.

Advanced design of multimedia learning environments using frame-based and object-oriented approaches. Usability testing. Integration of multimedia products with instructional programs and systems.

**684. Management of Educational Technology (3)**

Six hours of activity.

Prerequisite recommended: Educational Technology 544.

Research reviewed and findings related to current practices. Management of instructional design and training projects and programs. Role of educational technology and training in organizations. Recent trends evaluated.

**685. Informational and Instructional Technologies for Organizations (3)**

Six hours of workshop and activities.

Prerequisites: Educational Technology 540 and 541.

Organizational and informational technologies to support instructional products and services. Individual, team, and organizational analyses. Incentives, feedback, coaching, job-aid, selection and other strategies in relation to instructional technologies.

**700. Seminar in Educational Technology (1-3)**

Prerequisite: Educational Technology 540.

Selected areas, topics in educational technology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**775. Directed Internship in Educational Technology (2-6) Cr/NC**

Prerequisite recommended: Educational Technology 644.

Supervised internship in an educational setting. Application to take course must be made during preceding semester.

**798. Special Study (1-6) Cr/NC/SP**

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

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