Department of Instructional Technology and Learning Sciences

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Degrees offered: Master of Science (MS) and Doctor of Philosophy (PhD) in Instructional Technology and Learning Sciences; Master of Education (MEd) and Educational Specialist (EdS) in Instructional Technology

Graduate specializations: *MEd*—Educational Technology, Information Technology and School Library Media Administration; *MS* and *EdS*—Instructional Development for Training and Education

Undergraduate Programs

Objectives and Requirements

There is no major in instructional technology at the undergraduate level because of the need for those preparing in the field to have especially strong general education knowledge as well as depth in a specialized field of study. The minors include **School Library Media** and **Multimedia Development**. The objectives and requirements of these minors are as follows:

School Library Media Minor Objectives

1. Provides students with library media skills.
2. Prepares students to receive a Utah Library Media Endorsement.
3. Prepares students for employment as a School Library Media Specialist.

School Library Media Minor Requirements

This minor is delivered through distance education. Those persons wanting endorsement for positions in the public schools must have or be working toward a valid Utah teaching license and the prescribed School Library Media minor. A 2.7 grade point average is required for admission and endorsement as a school library media specialist at the bachelor's level. For detailed requirements, contact the department.

Multimedia Development Minor Objectives

1. Provides students with design skills.
2. Develops students' multimedia production skills.
3. Prepares students for employment in the multimedia field.

Multimedia Development Minor Requirements

Persons not seeking a public school position may elect the minor in Multimedia Development, in conjunction with a major in other fields. The Multimedia Development minor is especially appropriate for fields which require computer-based instruction, such as business, computer science, engineering, communications, and others. For detailed requirements, contact the department.

Graduate Programs

Instructional technology is a systematic way of analyzing, designing, developing, implementing, and evaluating the processes of learning and teaching with specific objectives based on research in human learning and communication. It employs a combination of human and nonhuman resources to bring about more effective instruction. Instructional technology includes aspects of instructional design, product development, interactive learning technologies, multimedia, distance education, and library and information literacy. Each aspect of the field has unique contributions to make to the teaching-learning process.

The department offers specializations in Educational Technology, Information Technology and School Library Media Administration, and Instructional Development for Training and Education. A program emphasis in online learning communities in education and training is also offered.

Graduates are in demand in business and industrial settings, as well as in education, because of their preparation in training and instructional design. Admission to the graduate program is open to all students regardless of their undergraduate preparation.

Admission Requirements

See general admission requirements, pages 36-37. The MS and MEd admission requirements include a 3.0 GPA for the last 60 semester credits (90 quarter credits) and an MAT score or GRE verbal and quantitative scores at or above the 40th percentile. In addition, the department requires that those applying for the EdS program have a master's degree, and a score at or above the 40th percentile on the verbal/quantitative tests of the GRE or 46 percent or above on the MAT. Those applying for the PhD program must have GRE verbal and quantitative test scores at or above the 40th percentile. Demonstrated writing and computer proficiency is required of all applicants. A minimum score of 213 computerized or 550 paper/pencil on the TOEFL is required for all prospective international students.

Applications for MS, EdS, and PhD degree programs must be submitted to the School of Graduate Studies by January 31. Applications for MEd programs must be submitted to the School of Graduate Studies by May 15. Space permitting, additional qualified candidates will be considered until the beginning of summer semester. Students who wish to be considered for financial aid must submit applications by January 31 for the coming academic year. All graduate students are expected to begin their programs in the fall semester.

Applicants for the EdS and PhD programs who do not hold a master's degree in Instructional Technology must complete additional course requirements.

No applications will be considered until all required information is received by the School of Graduate Studies.

Degree Programs

Master of Science (MS)

This degree emphasizes instructional design and development, and prepares the graduate with skills to apply principles of instructional systems design to education and training. The program prepares instructional developers to take positions in corporate training programs in business and industry. It also leads to careers in public and higher education, development of interactive learning technologies, telecommunications, distance education, and adult education.

The MS degree is available to qualified students with bachelor's degrees from any field. Undergraduate students planning in advance for an MS in Instructional Technology and Learning Sciences should consider the department's Multimedia Development minor as part of their bachelor's program.

Master of Education (MEd)

This master's program is only available through distance education via distance delivery methods. The MEd degree is a two-year cohort rotation (i.e., students proceed as a group through the two-year program). To be successful in this master's degree program, students should own or have access to a personal computer. They will also need a USU e-mail address and internet access in order to communicate with faculty members and other students in the program. Persons choosing the MEd have two specializations available: **Educational Technology** and **Information Technology and School Library Media Administration**. A **Distance Learning Endorsement** is also available within the MEd. Students accepted to the MEd may also choose certain electives from the Administrative Supervisory Certificate (ASC) program. They may then apply for acceptance to the ASC.

The **Educational Technology** specialization is directed at public school educators and administrators who are interested in applying the principles of educational technology to the teaching/learning process. This specialization may lead to a position as a district-level or building-level educational technology specialist responsible for technology integration and in-service training related to computers and other technologies.

The **Information Technology and School Library Media Administration** specialization is directed at persons seeking employment in a school library media center. Students seeking this specialization must complete the School Library Media minor (delivered through distance education) and apply for a Utah State Library Media Endorsement. This specialization may lead to a position as a district-level or building-level school library media specialist (K-12). The library media specialist is prepared to apply principles of library and information technology to help students and teachers. The library media specialist also understands the effective use of learning resources in the teaching/learning process.

The goal of the **Distance Learning Endorsement Program** is to provide public school educators with the knowledge and skills they need in order to be effective teachers of students who are participating in distance education programs. To prepare them for meeting the challenges of teaching and learning at a distance in the K-12 setting, the program aids master teachers in becoming (1) effective communicators with distant learners across the barriers of time and distance, and (2) proficient users of telecommunications technologies in instruction. Students can apply for the State Distance Learning Endorsement.

Educational Specialist Degree (EdS)

The Educational Specialist degree is intended for students interested in acquiring advanced skills in instructional technology beyond those of the master's degree. This program involves coursework, independent study, practicum experiences, and a culminating experience. The degree requires a minimum of 30 credits beyond the master's degree, providing the master's degree was received in the instructional technology field. For students with a master's degree in a field other than instructional technology, a minimum of 40 credits is required.

Doctoral Degree (PhD)

The doctor of philosophy degree emphasizes research and theory building in instructional design and development. The degree offers advanced preparation for graduates seeking a career in higher education, research centers, or corporate training and development.

Course Requirements

Course requirements for all degrees are dependent upon the area of emphasis and are individually planned by the student and the supervisory committee. For planning materials and program details, contact the department.

Financial Assistance

Fellowships, assistantships, and other financial support are available and awarded on a competitive basis. Apply through the department.

Instructional Technology and Learning Sciences Faculty

Professors
Byron R. Burnham, Dean, School of Graduate Studies; adult learning
J. Nicholls Eastmond, Jr., theory and evaluation
Mimi Recker, cognitive modeling, interactive learning

Adjunct Associate Professor
Michael K. Freeman, educational leadership

Assistant Professors
Brian R. Belland, scaffolding, problem-based learning, psychometrics, STEM education, service learning, technology integration
Joanne P. Bentley, learning theory and evaluation
Anne R. Diekema, information retrieval, digital libraries, metadata, evaluation
Yanghee Kim, human/computer interaction in learning systems with an emphasis on pedagogical agents, intelligent tutoring systems, instructional design, learning theory, teacher education with an emphasis on technology integration
Victor R. Lee, visual representations, curriculum design, cognitive science, everyday and intuitive reasoning, conceptual change
Brett E. Shelton, immersive technologies, cognitive studies
Andrew E. Walker, collaborative information filtering and problem-based learning, situated cognition
David A. Wiley, learning objects, instructional design theory

Adjunct Instructors
JaDene M. Denniston, school library media
Kevin L. Reeve, distance education

Lecturer
Sheri Haderlie, Instructional Technology and Learning Sciences Department Outreach Program Manager

Professors Emeritus
Alan M. Hofmeister, research
M. David Merrill, instructional design
Don C. Smellie, foundations
Ron J. Thorkildsen, research and interactive learning
R. Kent Wood, theory, foundations

Associate Professors Emeritus
J. Steven Soulier, message design, computer applications
Linda L. Wolcott, distance education, library media, and foundations

Course Descriptions

Instructional Technology and Learning Sciences (INST), click here