INSTRUCTIONAL TECHNOLOGY (ISTC)

ISTC 501 INTEGRATING INSTRUCTIONAL TECHNOLOGY (3)
Materials, devices, techniques and settings are presented in an overview of the field of instructional technology. Laboratory experiences are provided in the operation of instructional hardware. Must be taken for 2 units if student has taken ISTC 269. Prerequisite: Junior standing or departmental approval. Lab/Class fee will be assessed.

ISTC 541 FOUNDATIONS IN INSTRUCTIONAL TECHNOLOGY (3)
This introductory course provides an overview of the field of instructional technology. This course focuses on helping students to develop an awareness and understanding of the theories and philosophies driving the field. In addition, this course will explore common computer-related technologies used within most learning environments. Prerequisite: Acceptance into the Graduate School.

ISTC 601 SCHOOL LIBRARY MEDIA ADMINISTRATION (3)
The evaluation, planning, and policy development for the school library media center. Prerequisites: Graduate standing and completion of all level one and two school library media courses.

ISTC 605 WEB-BASED INSTRUCTION IN EDUCATION (3)
Principles of Web-based instruction in creating learning environments. Pedagogical, technological, organizational, institutional and ethical issues related to design, development and delivery. Prerequisite: ISTC 541 or equivalent.

ISTC 615 COLLECTION DEVELOPMENT (3)
Concepts, processes, guidelines and resources for the development of a high quality school library media center collection. Prerequisite: Graduate standing.

ISTC 633 INSTRUCTIONAL VIDEO (3)
Explores the design and production of video for education training. The emphasis on the instructional systems design process is supported by laboratory tasks that lead students through the process of producing instructional video. Computer-based editing is used. Prerequisite: Bachelor’s degree.

ISTC 651 INFORMATION LITERACY AND ACCESS (3)
Access and evaluation of information sources relevant to school library media centers. Prerequisites: Graduate standing and completion of all level one school library media courses.

ISTC 653 THE ORGANIZATION OF KNOWLEDGE (3)
The organization of knowledge in all formats including cataloging, subject analysis and bibliographic control. Prerequisite: Graduate standing.

ISTC 655 MULTIMEDIA DESIGN (3)
Introduction and overview to digital media (multimedia) in instructional settings. A laboratory task enables students to develop original media, gather and edit digital media assets, integrate their products into a computer presentation program and output their results in a variety of digital and analog media formats.

ISTC 663 APPLIED PSYCHOLOGY OF LEARNING (3)
Behaviorist, cognitivist and constructivist learning theories are discussed. Emphasis is on the application of those theories to instruction.

ISTC 667 INSTRUCTIONAL DEVELOPMENT (3)
Overview and application of the instruction systems approach for problem solving and the design of instruction. Media selection, needs assessment, prototyping, implementation and evaluation of instructional systems.

ISTC 674 SPECIAL TOPICS IN INSTRUCTIONAL TECHNOLOGIES (3-6)
Topics selected from the instructional technology field which are innovative and of immediate concern to existing instructional needs. May be repeated to a maximum of 6 units with no topic repeated. Prerequisite: bachelor’s degree.

ISTC 685 RESEARCH IN INSTRUCTIONAL TECHNOLOGY (3)
Students write a research proposal and concentrate on elements of a research study, inferential statistics and research in the field of instructional technology. Prerequisites: 12 units of ISTC courses at 600-700 level.

ISTC 687 COMPUTER-BASED INSTRUCTION (3)
The relationship between programmed instruction and computer-assisted instruction is examined. Students are required to demonstrate competencies in the design and production of computer-assisted instruction. Prerequisite: ISTC 541 or equivalent.

ISTC 691 DIRECT READINGS IN INSTRUCTIONAL TECHNOLOGY (1-4)
Independent readings and research in selected areas of instructional technology. Prerequisite: consent of program director.

ISTC 692 DIRECTED READINGS IN INSTRUCTIONAL TECHNOLOGY (1-4)
Independent readings and research in selected areas of instructional technology. May be repeated for a maximum of 4 units. Prerequisite: consent of program director.

ISTC 693 DIRECTED READINGS IN INSTRUCTIONAL TECHNOLOGY (1-4)
Independent readings and research in selected areas of instructional technology. May be repeated for a maximum of 4 units. Prerequisite: Consent of program director.

ISTC 694 DIRECTED READINGS IN INSTRUCTIONAL TECHNOLOGY (1-4)
Independent readings and research in selected areas of instructional technology. May be repeated for a maximum of 4 units. Prerequisite: Consent of program director.

ISTC 695 INDEPENDENT STUDY IN INSTRUCTIONAL TECHNOLOGY (1-4)
Independent readings and research in selected areas of instructional technology. Prerequisite: Consent of chairperson or program director.

ISTC 700 ASSESSMENT IN INSTRUCTIONAL TECHNOLOGY (3)
Contemporary theories and methodologies of assessment in instructional technology, including terminology and concepts, measurement principles and assessment instruments, with emphasis upon assessment of technology learning, technology integration, technology attitudes, performance, educational software designs and management of technology resource. Prerequisites: Admission to doctoral program or completion of level I: core sequence.

ISTC 702 EDUCATIONAL LEADERSHIP AND TECHNOLOGY (3)
Explores current research and theory related to technology policy, planning and leadership in education settings. Focus will include development of technology plans at the school district and state levels. Prerequisite: Admission to doctoral program or completion of level I: core sequence.
ISTC 705 ADVANCED WEB APPLICATIONS IN EDUCATION (3)
Includes contemporary theories, methodologies and advanced
techniques of using Web applications in the field of education and related
disciplines. Course covers application of using scripting language to
produce dynamic Web pages for educational purposes. Current Web
design software and graphing tools will be used. An online learning
environment using course management tools will be developed.
Prerequisites: Admission to doctoral program or completion of level I:
core sequence.

ISTC 707 LEARNING ENVIRONMENTS IN A DIGITAL AGE (3)
Contemporary learning theory will be used to design and evaluate
interactive learning environments that reflect the qualities of active,
constructive, collaborative, intentional, complex, contextual,
conversational and reflective learning. Prerequisites: Admission to
doctoral program or completion of level I: core sequence.

ISTC 709 LEGAL AND ETHICAL ISSUES IN INSTRUCTIONAL
TECHNOLOGY (3)
Legal, ethical and intellectual property issues related to the use of
technology in education. Analysis of case studies related to technology
use policies for education and human resource organizations.
Prerequisites: Successful completion of 15 credits of graduate courses
in instructional technology or education. Prerequisites: Admission to
doctoral program or completion of level I: core sequence.

ISTC 711 INNOVATION, CHANGE AND ORGANIZATIONAL STRUCTURES
(3)
Study of the interconnected and diverse forces of technological
innovation that impact learning organizations and the change process.
Departmental permit required. Prerequisites: Admission to doctoral
program or completion of level I: core sequence.

ISTC 717 DISTANCE EDUCATION IN THEORY AND PRACTICE (3)
Teaching strategies, technologies, learning styles and instructional
design principles with relation to distance-based and online learning are
introduced and discussed. Contemporary research, theories, practices,
and critical issues relevant to the field are addressed through an online
learning environment. Prerequisites: Admission to doctoral program or
completion of level I: core sequence.

ISTC 718 CRITICAL PERSPECTIVES OF TECHNOLOGY IN EDUCATION (3)
A reflective view of the moral, historical, social, and political views of
technology in education. Students will examine technology’s broader
impact on society. The content to be covered by this course will not
overlap with any other courses currently offered by the College of
Education. Prerequisites: Admission to doctoral program or completion
of level I: core sequence.

ISTC 720 INSTRUCTIONAL TECHNOLOGY CAPSTONE (3)
Provides students the opportunity to demonstrate mastery of required
coursework in the Instructional Technology program. Proposal
and completion of a comprehensive technology-intensive project.
Prerequisites: Completed 21 units in ISTC program.

ISTC 729 DIGITAL GAME BASED LEARNING IN EDUCATION (3)
An introduction to digital game based learning. Topics include the
theories, possibilities, and practices related to educational game design,
as well as the use of learning and commercial entertainment games for
educational purposes. Prerequisites: Six units of graduate coursework.

ISTC 731 THEORY AND PRACTICE FOR INTEGRATING DIGITAL
RESOURCES INTO LEARNING AND TEACHING (3)
Focuses on current theoretical perspectives on learning that underlies
decisions about technology integration in diverse educational settings.
Students will examine recent technological innovations surrounding
technology integration for teaching and learning; analyze effective
design of computer-based instructional materials; create and evaluate
case studies relating to technology integration, and critically examine
their own personal and professional values as an aspect of their work
as educator and instructional designers. Prerequisites: Admission to
doctoral program or completion of level I: core sequence.

ISTC 741 RESEARCH FOUNDATIONS OF INSTRUCTIONAL TECHNOLOGY
(3)
This seminar course will focus on examining philosophies and discourse
upon which the field of instructional technology is built. This course will
examine historical research, organizational and governmental standards,
alternative and critical theories, and paradigms and philosophies of
learning, design and technology. Prerequisite: Admission to doctoral
program or completion of level I: core sequence.

ISTC 767 ADVANCED THEORY AND INSTRUCTIONAL DESIGN (3)
Designed to extend the student’s understanding of instructional design,
to include advanced models, non-linear models, advanced assessment
evaluation and technique, and to provide a glimpse of instructional
design in the years to come. A comprehensive course project will be
completed using such techniques and theories. Does not overlap with
any existing course. Prerequisites: Admission to doctoral program or
completion of level I: core sequence.

ISTC 778 INVESTIGATING AND EVALUATING RESEARCH IN
INSTRUCTIONAL TECHNOLOGY (3)
This seminar course will focus on a critical review and evaluation of
current research findings and methodology. The emphasis is upon the
development of critical perspective of ongoing research in the field of
instructional technology and related specialization areas. The intent of
this course is that doctoral students will develop a review of literature
related to their dissertation proposal. Open only to students who have
completed the required doctoral core courses and have been admitted to
the ISTC doctoral program.

ISTC 779 PRACTICUM AND PORTFOLIO IN SCHOOL LIBRARY MEDIA
(3-6)
Students serve under the supervision of a school library media center
director. Students present graduate portfolios to level one students and
faculty in school library media. Prerequisite: Completion of all level one
and level two school library media courses.

ISTC 780 INVESTIGATING AND EVALUATING RESEARCH IN ISTC II (3)
This seminar course will focus on a critical review and evaluation of
current research findings and methodology. The emphasis is upon the
development of critical perspective of ongoing research in the field of
instructional technology and related specialization areas. The intent of
this course is that doctoral student will develop products related to their
dissertation proposal. This course may be repeated for a maximum of 6
credits. Prerequisites: ISTC 780.

ISTC 782 ADVANCED THEORY AND INSTRUCTIONAL DESIGN (3)
This seminar course will focus on examining philosophies and discourse
upon which the field of instructional technology is built. This course will
examine historical research, organizational and governmental standards,
alternative and critical theories, and paradigms and philosophies of
learning, design and technology. Prerequisite: Admission to doctoral
program or completion of level I: core sequence.

ISTC 787 INSTRUCTIONAL TECHNOLOGY THESIS (6)
An original investigation, using research method and design, of a
research problem. Credit granted after thesis accepted. Prerequisite:
Consent of chairperson.

ISTC 797 GRADUATE INTERNSHIP IN INSTRUCTIONAL TECHNOLOGY (3)
Project under the direction of a faculty adviser. The course may be taken
twice for credit. Prerequisites: 12 units of ISTC courses at 600-700 level
and consent of program director.

ISTC 897 INSTRUCTIONAL TECHNOLOGY THESIS (6)
An original investigation, using research method and design, of a
research problem. Taken over two consecutive semesters. Credit granted
after thesis accepted. Prerequisite: The previous course, ISTC 897, taken
over two consecutive terms.
ISTC 899 THESIS CONTINUUM (1)
Continuation of thesis research. Prerequisite: ISTC 898.

ISTC 998 INSTRUCTIONAL TECHNOLOGY DISSERTATION (1-9)
An original research investigation using research literature, methods, analysis, and design. Prerequisite: consent of advisor.

ISTC 999 DISSERTATION CONTINUUM (1)
Continuing work on dissertation after completion of basic dissertation credits. May be repeated as necessary.