INSTRUCTIONAL TECHNOLOGY (IX)

IX500: Foundations of Instructional Technology
This course focuses on the field of instructional technology, placing the field within the context of its history, current practices, and future directions. It provides the conceptual framework for other courses within the degree program.
Quarter Credit Hours: 5 | Prerequisite: None

IX510: Instructional Design
This course presents the philosophical and theoretical foundation of instructional design. Students explore instructional design process models commonly used by practitioners. They will apply the stages of a process model to create design documents in the education and training contexts. The model will address instructional analysis, assessing learning from instruction, media characteristics and selection, managing instruction, formative and summative evaluation, and the motivational design of instruction.
Quarter Credit Hours: 5 | Prerequisite: None

IX520: Needs Assessment and Evaluation in Education and Training
This course presents the knowledge and skills necessary to identify training and/or instructional problems and potential solutions. You will explore the advantages and disadvantages of multiple techniques for performing a needs assessment. You will Students develop skills and collect resources related to the selection and use of analysis methods. You will conduct a needs analysis and submit a report in an education or training context. You will also consider evaluation taxonomies and models, tools, and techniques, and develop an evaluation strategy for an instructional program.
Quarter Credit Hours: 5 | Prerequisite: None

IX535: Developing Instructional Materials
This course provides the knowledge and skills required to develop instructional materials for an instructor-led training scenario as approved by the instructor. This training scenario will provide the context and focus for the materials. Each student will create a series of print-based instructional materials for this scenario considering best practices and design and development guidelines.
Quarter Credit Hours: 5 | Prerequisite: None

IX536: Design and Development Tools
In this application-based course, you will discuss trends and issues of eLearning content development and explore similarities and differences among eLearning authoring tools and methods. You will learn how to develop original content with a variety of authoring tools and software applications and to repurpose existing material with reusable learning objects (RLOs) and content repositories. Interface layout standards, accessibility and SCORM compliance, and collaborative environments are explored. You will consider technical and development requirements for eLearning delivered through multiple learning channels including online and mobile platforms. You will also create a design document and instructional module in this course.
Quarter Credit Hours: 5 | Prerequisite: None

IX540: Research Methods for Education and Instructional Technology
This course presents an overview of the educational research process and the importance of research to education. The course lays the foundation for conducting research focusing on the characteristics and terminology of research, appropriate ethical considerations involved in the protection of human subjects, proper APA formatting of citations and references, plagiarism issues, and the steps in finding scholarly articles for a review of the literature.
Quarter Credit Hours: 5 | Prerequisite: None

IX542: Multimedia Development and Implementation
This course provides an introduction to the design, development, and evaluation of multimedia in different learning contexts. You will acquire fundamental knowledge and skills essential to the design and development of effective media projects. You will examine and critique multimedia-based learning experiences. The course explores tools to produce online instructional materials composed of audio, graphics, and video.
Quarter Credit Hours: 5 | Prerequisite: None

IX550: Project Management and Implementation in Education and Training
This course presents approaches to project management for education and training projects. You will explore concepts of project management and leadership, tools, procedures, and methodologies. You will focus on creating, monitoring, and reporting project plans from the proposal to the implementation stages. You will consider project constraints including time, cost, resource allocation, and scope. Concepts of change management are also explored and applied to implementation strategies used in education and training environments.
Quarter Credit Hours: 5 | Prerequisite: None

IX560: Instructional Technologies Infrastructure
This course provides an introduction to computer networking and establishes a basic understanding of the infrastructure required to incorporate technology into the K-12 environment. You will learn the basics of computer networks and technology infrastructure. You will also learn how infrastructure supports classroom design for learning with technology tools. You will identify the skills necessary to design, install, maintain, and troubleshoot a technology-based learning environment and analyze the roles necessary to maintain effective infrastructure. In addition, you will learn how to assess institutional technology needs and plan for future growth.
Quarter Credit Hours: 6 | Prerequisite: None

IX562: Technology Enhanced Learning Environments - K-12
In this practitioner-oriented course, students will explore existing and emerging multimedia technologies used in K-12 classrooms through peer and individual assignments. They will evaluate existing instructional resources available with classroom textbooks in open source content and learning object repositories. They will design and create an instructional lesson appropriate for the K-12 setting while adhering to federal, state, and local mandates regarding media development.
Quarter Credit Hours: 6 | Prerequisite: None
IX565: Design of Learning Environments
This course presents activities related to the design of a learning application. You will explore advantages and disadvantages of multiple learning environments and content delivery technologies. You will develop a plan for an individualized learning project that includes a template for design of a specific environment. Course topics include education and communication theory, course and content delivery methods, asynchronous and synchronous technologies, multimedia design, usability testing, and integration of multimedia objects within instructional programs and systems.
Quarter Credit Hours: 5 | Prerequisite: None

IX570: Design of Online Instruction in K-12 Environments
In this application-based course, you will explore similarities and differences between web-based learning and on-ground learning in K-12 classrooms. You will learn how to repurpose existing material and chunk content into online modules while organizing and managing reusable learning objects. You will design assessment items suitable for the online environment and learn about issues related to assessing students from a distance. You will create design documents and content for an online course. You will also participate in peer-review evaluations and provide constructive feedback based on principles of online instructional design.
Quarter Credit Hours: 5 | Prerequisite: None