EDTC - Educational Technology

EDTC 602 Educational Technology: Field, Theory, Profession
Credits 3. 3 Lecture Hours.
Educational Technology: Field, Theory and Profession. Introduces the student to the educational technology profession and provides a conceptual map of the theory, research and practice of the field; a historical overview of the field aids in bringing current educational technology practices into perspective.
Prerequisite: Approval of department head.

EDTC 608 Foundations of Distance Learning
Credits 3. 3 Lecture Hours.
Communication theory, learning theories, and systems theory related to distance learning; application of effective and efficient instructional methodologies to educational/instructional settings via multiple distance education technologies and techniques.
Prerequisites: EDTC 645 or approval of instructor; approval of department head.

EDTC 613 Integrating Technology in Learning Environments
Credits 3. 2 Lecture Hours. 1 Lab Hour.
Develops a broad understanding of what is involved in designing technology rich environments to support active learning; examines the integration of human learning theories with instructional design and development practices in the selection, preparation, evaluation, and ethics of instructional technology implementation.

EDTC 621 Graphic Communication and Interface Design
Credits 3. 3 Lecture Hours.
Application of research findings and design principles to the critical analysis of the interfaces of everyday objects, print materials, and Web sites; effective design of graphical displays to communicate functionality and structure; issues related to flawed interfaces, elegant design solutions, user-centered design, usability testing, and Web site accessibility.
Prerequisite: Approval of department head.

EDTC 631 Educational Video
Credits 3. 3 Lecture Hours.
Design and development of educational video programs using an effect-to-cause model: message definition, scriptwriting, storyboarding, production, post-production editing and evaluation; topics include lighting, sound, the operation of digital video cameras, the use of digital editing software, visual effects, compression, video sharing websites, copyright law, production personnel, medium requirements.
Prerequisite: Approval of instructor.

EDTC 641 Educational Game Design
Credits 3. 3 Lecture Hours.
Formal and dramatic elements of successful non-educational games for principles of effective game design; application principles to the critique of existing educational games; examination commercial games originally designed for entertainment and their use to address educational objectives; games through the lens of multiple theories of learning and motivation, including situated cognition, flow, and systems theory.
Prerequisites: Graduate classification; approval of department head.

EDTC 642 Designing for Mobile Learning
Credits 4. 3 Lecture Hours. 3 Lab Hours.
Introduction to basics of designing educational applications for mobile devices; emphasis on instructional, visual and human-computer interaction design principles; hands-on design and development work combined with a theoretical approach to designing learning experiences; previous programming experiences not required.
Prerequisites: Graduate classification; approval of department head.

EDTC 645 Instructional Applications of Computer Technologies I
Credits 3. 3 Lecture Hours.
Introduction to the integration of computers, telecommunications, and related technologies into educational practice; resources for personal productivity and development/delivery of instructional materials; applications for both educators and students (word processing, databases, etc.); projects include hands-on development of HyperText, MultiMedia, and Internet (web-based) resources in participant's own area of study.
Prerequisite: Approval of department head.

EDTC 646 Instructional Applications of Computer Technologies II
Credits 3. 3 Lecture Hours.
Issues (social, educational, etc.) and techniques associated with educational applications of computers and related resources and techniques (graphics, multimedia, etc.); relationship of course activities and products to individual educational/instructional philosophies; web-supported.
Prerequisites: Graduate classification; approval of department head.

EDTC 651 Tutorials and Simulations
Credits 3. 3 Lecture Hours.
Application of theory to the design and development of two types of computer-based instructional programs: tutorials and simulations; critique of existing instructional software for K-12 students and adult training programs; guidelines for design decisions related to rich media, navigation, learner/program control, practice, interactivity, and feedback.
Prerequisite: Approval of instructor.

EDTC 654 Instructional Design: Techniques in Educational Technology
Credits 3. 3 Lecture Hours.
Introduces systems approach to instructional design with focus on the functions of systems models in planning, developing and evaluating instruction; use of instructional development models which systematically assure proper instructional design; participants will develop instructional products individually and in groups; a strong theoretical foundation utilized.
Prerequisite: Approval of instructor and department head.

EDTC 655 Instructional Design II
Credits 3. 3 Lecture Hours.
Preparation for leadership in instructional design through exploration of project management, needs assessment, goal analyses, rapid prototyping, problem-based learning, case-based learning, design of learning objects, ID for international audiences, instructional materials and program evaluation; theories that contribute to the field.
Prerequisites: Graduate classification; approval of department head; EDTC 654.
EDTC 656 Computer Graphics: Educational Applications and Production Techniques  
**Credits 3. 2 Lecture Hours. 2 Lab Hours.**  
Computer graphics production used in the development of educational materials; acquired skills and knowledges applied to the student’s interest area with respect to theoretical and research issues relating to the effective instructional use of print and computer-based instructional materials; techniques include digitizing, image-processing and animation.  
**Prerequisites:** EDTC 645 or approval of instructor; approval of department head.

EDTC 660 Interactive Video/Multimedia: Production and Utilization  
**Credits 3. 3 Lecture Hours.**  
Principles and techniques of interactive video/multimedia design and production; practical applications of media (video, digitized video and audio) production techniques and instructional control programs utilizing authoring software; produce materials for interactive instructional programs involving features such as: CD-ROM video and audio, simulations, interactive digital movies, web-based delivery, etc.  
**Prerequisites:** EDTC 645 or approval of instructor; approval of department head.

EDTC 662 Computer Utilization in Educational Research and Practice  
**Credits 3. 3 Lecture Hours.**  
Use of computers for application in educational and research settings; activities include student/subject monitoring, hardware use and design, automatic data collection; data storage, retrieval, transmission and analysis; web-based research formats are included; projects will relate to major area of study.  
**Prerequisites:** EDTC 645 or approval of instructor; approval of department head.

EDTC 664 Management of Instructional Telecommunication Systems  
**Credits 3. 2 Lecture Hours. 2 Lab Hours.**  
Management of Instructional Telecommunication Systems. Analysis of instructional telecommunications needs associated with educational and training programs; analysis, design, development, implementation and evaluation of computer-based management systems.  
**Prerequisites:** EDTC 645 or approval of instructor; approval of department head.

EDTC 668 Applications of Telecommunications in Education  
**Credits 3. 2 Lecture Hours. 2 Lab Hours.**  
Instructional applications of telecommunications; analysis of characteristics of varied systems, both dedicated and public networks, and design of appropriate strategies and methods using those systems.  
**Prerequisites:** EDTC 645 or approval of instructor; approval of department head.

EDTC 683 Practicum in Educational Technology  
**Credits 1 to 3. 1 to 9 Other Hours.**  
Supervised experience in applied area of educational technology; student will plan and develop an integrative product relating to educational technology theory, practice and equipment.  
**Prerequisite:** Approval of instructor and department head.

EDTC 684 Professional Internship  
**Credits 1 to 6. 1 to 6 Other Hours.**  
Supervised experiences in performing professional functions appropriate to career goals.  
**Prerequisites:** Application one month prior to registration; approval of instructor and department head.

EDTC 685 Directed Studies  
**Credits 1 to 4. 1 to 4 Other Hours.**  
Directed individual study of selected problems in instructional technology not within thesis research and not covered by any other course.  
**Prerequisite:** Approval of instructor and department head.

EDTC 689 Special Topics in...  
**Credits 1 to 4. 1 to 4 Lecture Hours.**  
Selected topics in an identified area of educational technology. May be repeated for credit.  
**Prerequisite:** Approval of instructor.

EDTC 691 Research  
**Credits 1 to 23. 1 to 23 Other Hours.**  
Research for thesis or dissertation.  
**Prerequisite:** Approval of major advisor and department head.