

# Educational Technology

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## Courses

### ***ED TECH 2230 Information Literacy: 3 semester hours***

Students will analyze and evaluate multiple sources of information using modern technology to research, retrieve, synthesize, construct and present information for academic disciplines. The course will assist students in the development of educational technology skills that allow for specialization in their chosen major.

### ***ED TECH 3135 Technology for Educators: 1 semester hour***

This course will instruct teacher candidates in the use of digital tools in education. Candidates will develop strategies for incorporating current technology developments and social media in educational practice.

### ***ED TECH 3420 Computer Programming and Pedagogy: 1-3 semester hours***

This course examines the emerging field of computational thinking and learning theories relevant to teaching computer programming to students from kindergarten to university. Students will teach one another and learn to critique themselves and peers on pedagogical effectiveness. Students will learn a new programming language while learning how to teach others using that same language. Educational uses of student computer programming will be examined.

### ***ED TECH 4302 Educational Technology Instruction in Educational Agencies: 3 semester hours***

The course focuses on how computers and the internet have changed teaching and learning; how educators can facilitate inquiry-based learning, and on the design and implementation of technology-rich activities and projects. Practices to be explored include making presentations; searching for information and educational resources; organizing, writing, and displaying information and data. Students may not receive credit for both ED TECH 4302 and ED TECH 5301.

### ***ED TECH 4436 Computer-Mediated Teaching and Learning in Education: 3 semester hours***

Explores the theory, research, and practice of using computer-mediated communication and computer-supported collaborative learning in education. Education could be formal or informal, in an institutional setting or not. Students will get experience with several different technologies during the semester.

### ***ED TECH 4558 Computer Ethics for Educators: 3 semester hours***

Prerequisites: Junior standing or consent of instructor. Examination of ethical issues concerning the use of computers generally, their use in education, and the engineering of particular computer technologies. Aims at developing awareness of these issues and skills for ethical decision-making regarding them through careful, analytical methods. Typical issues include privacy, intellectual property, computer fraud, the possibility of artificial agents, and others. Available for graduate credit.

### ***ED TECH 5301 Introduction to Computers and the Internet in Education: 3 semester hours***

The course focuses on how computers and the internet have changed teaching and learning; how teachers can facilitate learning in inquiry-based, technology-rich classrooms; and on the design and implementation of technology-rich activities and projects. Introduces students to the networked computer as an instructional tool. Course participants will be introduced to how teachers and their students can use computer tools in appropriate ways for different content areas and educational levels. Practices to be explored include making presentations; searching for information and educational resources; organizing writing, and displaying information and data.

### ***ED TECH 5340 Selection and Utilization of Educational Multimedia: 3 semester hours***

Prerequisites: ED TECH 5301 or consent of instructor. Prepares students for selecting and utilizing multimedia technologies for learning. Students will conduct projects involving educational multimedia programs available on computers or over telecommunications networks. The projects will incorporate graphics, sound, and video. The goal of working on these projects is to prepare students to facilitate others' use of multimedia in classrooms and other educational contexts.

### ***ED TECH 5420 Advanced Computer Programming and Pedagogy: 1-3 semester hours***

Prerequisites: Graduate standing. This course examines the emerging field of computational thinking and learning theories relevant to teaching computer programming to students from kindergarten to university. Students will teach one another and learn to critique themselves and peers on pedagogical effectiveness. Students will learn a new programming language while learning how to teach others using that same language. Educational uses of student computer programming will be examined.

### ***ED TECH 6135 Technology for Preparing Inquiry-Based Teaching: 1 semester hour***

Prerequisites: Graduate standing. This course instructs teacher candidates in the use of digital tools in their teaching practice. Candidates develop strategies for incorporating current technology developments and social media in educational practice. Technology for educators challenges the candidates to think about the underlying principles, terms, and concepts of educational technology. Students are introduced to the different methods teachers can use to integrate technology into classroom instruction for varying grade levels and content areas. Activities undertaken in this course include learning about educational technology tools and applying some of them to create the academic instructional materials through interactive collaboration.

### ***ED TECH 6404 Seminar: 1-10 semester hours***

Prerequisites: ED TECH 5340 or consent of instructor. Seminar in educational technology addressing special issues and topics not normally included in the regular educational technology courses.

### ***ED TECH 6416 Teaching and Learning with Technology: Graphical Representational Tools: 3 semester hours***

Prerequisites: ED TECH 5340 or consent of instructor. Examines how graphical representation tools can be used to enhance teaching and learning. Students will learn about techniques for visualizing and organizing information and data in science, math, the social sciences, and humanities, and will become familiar with research and practice pertaining to their use in a variety of learning activities and projects.

**ED TECH 6434 Technology and Privilege: 3 semester hours**

Prerequisites: Graduate standing. Covers issues relating to the digital divide in schools and the society. The focus will be on technology in education with an emphasis on the ways that policies and practices perpetuate the divide. To examine this phenomenon, Critical Race Theory (CRT) will be one lens to examine the inequality.

**ED TECH 6435 Instructional Technology and Education Reform: 3 semester hours**

Prerequisites: ED TECH 5340 or consent of instructor. Students will learn how to foster changes in uses of technology for learning in schools, based on a historical understanding of previous technology reforms, and a critical assessment of recent reforms. Questions addressed included: What did stakeholders predict and hope for with earlier educational technologies, early uses of the computer and networking, and present technological innovations? What actually happened? Why? How can teachers and other educators help foster and spread effective use of technology for learning?.

**ED TECH 6436 Computer-Mediated Communication in Education: 3 semester hours**

Prerequisites: ED TECH 5340 or consent of instructor. Explores the theory, research, and practice of using computer-mediated communication and computer-supported collaborative learning in education. Learning environments including elementary, secondary, higher, and adult education will be considered.

**ED TECH 6437 Distance Learning via Networks and Telecommunications: 3 semester hours**

Prerequisites: Graduate standing. The course is an investigation in the ways that learning and teaching across the barriers of time and distance are similar to and different from face to face learning and teaching. Students will study the influence of interactive media: videoconferencing, asynchronous discussions and other commonly used methods.

**ED TECH 6444 Cognition and Technology: 3 semester hours**

Same as ED PSY 6444. Prerequisites: ED PSY 6111 or consent of instructor. Examines cognitive theories and computer-based tools for learning. Students will gain a critical understanding of the relationship between the design of technological tools, the use of those tools in educational settings, and their implications for learning.

**ED TECH 6448 Technology-Supported Inquiry Learning: 3 semester hours**

Prerequisites: ED TECH 5340 and ED PSY 6310 or consent of instructor. Educational technology such as networked computers and software can play a supportive role in inquiry-based learning. Students will explore the theoretical background, design issues, and pragmatic realities of technology-supported inquiry learning environments. Such learning environments are best understood as systems involving social, cultural, material and psychological aspects. Consideration will be given to the important properties of settings, activities and technologies, as well as the role of instructors.

**ED TECH 6452 Educational Multimedia Design: 3 semester hours**

Prerequisite: ED TECH 5340 or consent of instructor. Examines principles and techniques for the design of visually and functionally effective multimedia educational resources. Emphasis will be placed on techniques for the computer-based production of materials incorporating text, graphics, and video. Rapid prototyping and evaluation techniques will be incorporated.

**ED TECH 6454 Instructional Video Production: 3 semester hours**

Prerequisites: ED TECH 5340 or consent of instructor. Elements of digital video production will be studied and used to produce video for a variety of formats. Students will develop the skill to produce and stream programs for school news programs, video annuals, documentaries and staff development programs.

**ED TECH 6490 Internship: 1-10 semester hours**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

**ED TECH 6497 Problems: 1-10 semester hours**

Prerequisite: ED TECH 5340 or consent of instructor. Individual study on topics pertaining to educational technology.

**ED TECH 7070 Higher Education and Technology: Theory and Practice: 3 semester hours**

Prerequisites: Doctoral standing or consent of instructor. Students explore recent research of classical learning theories and pedagogy in order to incorporate advanced technology. Students apply both theory and practice to develop and present lesson modules that explore research in this area, and illustrate the use of technology in teaching. Detailed constructive criticism is used with the presentations.