EDUCATIONAL TECHNOLOGY (MD)

MD 0300 Introduction to Educational Technology 3 Credits
This course covers the principles and applications of technology literacy in education. Topics include designing effective teaching strategies and environments conducive to learning; application of media and computer technologies in teaching; the use of the Web in teaching K-12; Microsoft Office applications; developing home pages; evaluating software; and examining new technologies for education. A field experience is included in this course.

MD 0400 Introduction to Educational Technology 3 Credits
This foundational course offers a hands-on overview of effective teaching methods using digital technologies. Candidates will gain understanding of the potential applications of educational technology in schools, organizational settings, and higher education. The course develops candidates' skills in using digital technologies to design and implement effective learning environments for students from diverse academic and social backgrounds.

MD 0401 Special Topics in Educational Technology (Shell) 3 Credits
This course explores contemporary issues in educational technology. Topics vary from semester to semester and will be chosen by faculty to address issues of current relevance that are not addressed in other course offerings.

MD 0403 The School Library I 3 Credits
This course, the first in a two-semester sequence, provides an introduction to the current policies and practices of effective school library programs. Candidates will examine the professional skills, dispositions and responsibilities related to the roles of the school library media specialist as defined in AASL standards: instructional partner, teacher, information specialist, program administrator and technology leader. Previously MD 0403A.

MD 0404 The School Library II 3 Credits
This course, a continuation of the material presented in MD 0403, provides an introduction to the current policies and practices of effective school library programs. Candidates will examine the professional skills, dispositions and responsibilities related to the roles of the school library media specialist as defined in AASL standards: instructional partner, teacher, information specialist, program administrator and technology leader. Previously MD 0403B.

MD 0405 Management of School Library Resources for Teaching and Learning 3 Credits
This course provides candidates with hands-on experience in managing print and digital resources. Topics include: approaches to supporting curriculum through collection development; strategies for purchasing and acquisition of databases, books, and multimedia materials; cataloging and creating MARC records to provide effective access. Each candidate will create a fully functioning circulation/catalog system complete with overdue books, statistics reporting, reserve and temporary items and special collection groups. Recent trends in web-based access to library resources will be explored.

MD 0406 Introduction to Reference 3 Credits
Candidates will explore print and online resources, and develop competency in selecting, acquiring and evaluating resources to meet student needs. Course activities will emphasize communication skills and instructional strategies needed to provide effective reference services in school libraries.

MD 0409 The Literate Environment: P-12 Literature and Reading 3 Credits
Candidates will explore factors related to creating a literate environment and the roles of school and classroom libraries. This course includes an overview of P-12 literature, an analysis of approaches to reading instruction and an examination of collaboration between reading professionals - literacy coaches, reading specialists and school library media specialists.

MD 0413 Technology Methods for Middle School 3 Credits
This interdepartmental course introduces students to the philosophy and organization of middle level education in the digital age. Students learn and apply instructional strategies and planning methods to integrate technology appropriate for middle-level learners from diverse academic and social backgrounds. During the required 25-hour field work experience, students are partnered with a classroom teacher to design and implement a technology-enhanced instructional module. Open only to students who have been formally accepted into the secondary education or educational technology programs.

MD 0414 Geospatial Technologies in the Classroom 3 Credits
In this course, we will explore geospatial technologies both outdoors and in the computer lab using GPS and GIS, and apply "community games" such as geocaching and protocols for conducting "real world" research with students. Participants will develop skills and applications of geospatial technologies for curricular integration.

MD 0429 Teaching and Training with Online Environment 3 Credits
This course will focus on ways in which teachers, trainers, and technology support professionals can use a variety of online tools to engage learners of all types. Students will explore ways to effectively employ webinars, podcasts, screen captures, and videos to support online and blended learning environments, as well as how to consider relevant technological issues such as bandwidth, file types, policies, and mobile device access.

MD 0430 Digital Storytelling in the Classroom 3 Credits
Studies have shown that our brain organizes, retains, and accesses information through story. Therefore, teaching with story allows students to remember what is being taught, access it, and apply it more easily. This course is designed for any educator looking to utilize technology to encourage storytelling at all levels. While maintaining a focus on traditional conventions of storytelling, such as character development, story mapping, and writing techniques, this course aims to develop the next generation of storytelling through a technological lens. Crosslisted with ED 0430.

MD 0442 Design and Development of Multimedia Programs 3 Credits
Participants will explore five different types of digital multimedia production and come to understand how it can best be adapted to create an entire learning experience. Candidates of all levels of experience will gain experience with four different types of multimedia tools: audio recording/editing, video recording/editing, drawing/comics/animation, and game creation, and will create a sample production for each type of tool. In addition, participants will explore a variety of platforms for combining various multimedia creations into a digital publication, such as an eBook and or other interactive presentation. All material will be presented with an eye toward the practical use of these tools in K-12 classrooms, and will also address larger issues such as accessibility, copyright compliance, and technology and economic inequity.

MD 0443 Integrating Instructional Technologies in Elementary School Education **3 Credits**
This course focuses on the application of a variety of instructional technologies including the Internet, spreadsheets, databases, graphic programs, and multimedia programs to structure effective learning environments for elementary education students. The course also emphasizes reviewing available teachers' resources including lesson plans, collaborative projects, and cultural diversity projects. Crosslisted with ED 0443.

MD 0452 Integrating Technology in the Content Areas: Language Arts and Social Studies **3 Credits**
This course addresses the infusion of new technologies in teaching language arts and social studies curricula. Participants study and assess the educational values of innovative teaching strategies that employ a broad range of instructional materials and resources. Museum-based education and community partnerships are an integral part of this course. Based upon a sound theoretical framework, instructional models and best practices, participants design and create lesson activities and materials integrating technology resources including digital archives, digital storytelling, Geographic Information Systems (GIS) and other online and publishing tools. Crosslisted with ED 0452.

MD 0460 Principles of Instructional Development **3 Credits**
This course covers the principles and application of systemic design of instruction in multimedia curricula design. Topics include designing, developing, and evaluating instructional materials; selecting media; conducting needs assessment and learner analysis; writing instructional objectives; and assessing learner performance. Candidates analyze, evaluate, and propose potential solutions to selected case studies and conduct a needs assessment.

MD 0463 Methods for School Library Media **3 Credits**
Students will explore effective implementation of the school library media program, integrating current research and actualizing best practices in the field. Topics will include strategies for teaching and learning in multimedia environments, organizing information and support for K-12 classrooms and structured focus to help the future school library media specialist develop the skills and dispositions necessary to manage the roles and responsibilities of teacher and instructional partner.

MD 0465 Emerging Technologies **3 Credits**
This course will examine specific technologies that are being used in the classroom at an increasing frequency. Specific technologies covered will vary depending on the section. The course can be taken more than once for credit depending on the topic covered with approval from the program director. This is a hands on course, and students will be working with the actual assigned technologies. Possible topics may include: AR/VR in the Classroom, Multimedia in the Classroom, Podcasting in the Classroom, E-Learning in the Classroom, Flipping the Classroom, Google Tools in the Classroom, Mobile Devices in the Classroom, QR Codes in the Classroom, Digital Badging.

MD 0469 Establishing Worldwide Learning Communities through Technology **3 Credits**
Worldwide developments continue to heighten awareness of the importance of connections between people on a global scale. When we consider our world from such a perspective, the need for understanding and education becomes glaringly apparent. This course views the benefits of using technology for communication and collaboration on a broad scale from the perspectives of both students and educators. Technologically connected learning communities around the globe occur through students forming partnerships to learn about each others' customs, languages, and cultures; teachers collaborating on teaching strategies and curriculum development; or administrators and policymakers exchanging views on educational issues. Candidates in this course examine the instructional strategies, issues, and concerns for connecting communities of learning globally along with the related technological tools and techniques.

MD 0470 Designing for Online Instruction **3 Credits**
This course examines the nature of teaching online, the development of online teaching courses and activities, and the use of integrated media resources in online learning in K-12, higher education, and professional development settings.

MD 0472 Information Literacy Through Inquiry **1-3 Credits**
Inquiry-based learning is a curricular framework that develops candidates' information literacy skills by encouraging rigorous investigation, information retrieval, collaboration, and reflection, paired with transformative learning technologies. Participants learn to locate, evaluate, and use a variety of electronic, print, multimedia, and interpersonal resources, and create a teaching unit using an online learning environment developed by internationally recognized leaders in inquiry-based education. Crosslisted with ED 0472.

MD 0490 Achieving an Interdisciplinary Approach to Teaching through Technology **3 Credits**
Achieving an interdisciplinary approach to teaching is a challenge facing many of today's educators. It is a set of complex tasks that involves integrating content across disciplines, good instructional design, effective planning, and creative pedagogical strategies while at the same time realizing educational equity among a diverse student population. Fortunately, technologies of instruction can help with the realization of these tasks. In preparation for the interdisciplinary challenge, teachers need exceptional instruction in the stages of interdisciplinary curriculum development with technology. This course addresses the selection, use, modifications, design, integration, and implementation of interdisciplinary curricula using technology in a culturally diverse environment. It aims at helping candidates in the course to develop their understanding of the potential use of technologies of instruction in achieving an interdisciplinary cross-cultural approach to education.

MD 0500 Technology and Transformational Culture **3 Credits**
Candidates will explore contemporary philosophies in learning and information technologies. Recent research that supports effective approaches to technology integration, and the implications for evidence based practice in instructional settings in schools, agencies and professional development environments will be emphasized. Optional opportunities for field work based on individual professional goals.

MD 0503 Research and Evaluation in K-12 Consultation and Leadership **3 Credits**
Candidates will examine methods of empirical research and measurement, the role of descriptive and inferential statistics in data assessment and will perform critical analyses of effective quantitative, qualitative, and mixed methods research approaches. Topics will include: evaluation of current research studies and implications for professional practice; data assessment; the roles of the K-12 specialist: school library media specialist, technology specialist, special education/TESOL/ Bilingual co-teacher and/or consultant in providing support for general education teachers and a diversified student population, and the skills needed for effective data-based decision making in school leadership. Crosslisted with RLD 0503.

MD 0540 Creating and Curating Digital Content **3 Credits**
While the explosion of both online educational resources and digital content creation tools has opened up a new world of possibilities for classroom teachers, few instructors have the time to do the exploration and collation necessary to truly take advantage of all the Internet has to offer. In this hands-on course, each student will be given the opportunity to assume the role of digital content developer for an actual university course: working closely with an instructor to define and research course content, learning how to evaluate digital tools for presenting material across devices and platforms, and choosing the best options -- be they aggregators, e-book creators, online portfolios, or other web tools -- to produce, collate, and deliver the content required by the professor. The materials produced will subsequently be used in actual Fairfield University courses. This course is open only to students enrolled in the Educational Technology program.

MD 0541 21st Century Literacies in the Classroom **3 Credits**
The term "literacy" used to be associated with the ability to read and write. How we interact with our environment is evolving as technology evolves. This has resulted in an expansion of the definition of literacy. Literacy now includes several facets: Information, Media, and Information and Communication Technologies (ICT). It is important for students to understand the 21st century literacies and be able to use them as a guide in the global community that helped create the need for them. This course explores the concept of 21st century literacy and how these skills can be both taught to students and integrated into our teaching to support student learning.

MD 0545 Designing and Developing Training Programs **3 Credits**
Designed for prospective training specialists, personnel generalists, school media specialists or line personnel in business and industry, this course focuses on designing and developing training programs for administrative professionals, management employees, and school personnel. Course assignments provide individualization and tailoring of course content to candidate needs and working environments. Crosslisted with PY 0545.

MD 0546 Integrating the Arts and Technology in K-12 Teaching and Learning **3 Credits**
The value of the visual and performing arts in supporting essential critical thinking is well documented in recent research. Arts education is closely linked to every goal of school reform, academic achievement, social and emotional development, civic engagement, and equitable opportunity. Candidates will examine integration of the arts in content areas, and the robust opportunities in both formal and informal learning environments offered by technology applications and digital resources. Crosslisted with ED 0546.

MD 0554 Understanding Media Literacy through Popular Culture and Mediated Environments **3 Credits**
Media literacy is the ability to access, analyze, evaluate, and produce media messages through a variety of mediated environments. Class time will consist of a blending of lectures and class discussions that will illustrate how popular culture has altered a generation of children while at the same time looking at how it is understood and perceived by them. Further, we will explore how media literacy can be integrated into classroom lessons to increase motivation and cultural awareness.

MD 0585 Capstone Experience **3 Credits**
Prerequisites: All other required coursework in the Educational Technology program.
This course serves as the final summative assessment for educational technology students. Their final product should reflect their cumulative work from the program.

MD 0590 Practicum in Educational Technology **3-6 Credits**
This practicum provides full-time students with firsthand experience in educational technology management.

MD 0594 Survey of Innovation in Technology **3 Credits**
Technologies are being introduced at an astounding pace, and their adoption is increasingly being driven by consumers rather than by institutional needs and considerations. For educational technology managers, the ability to critically assess new tools and foresee where technology is heading are essential skills. In this course, students will examine the introduction of a variety of mass communication and digital technologies in the recent past in order to develop an understanding of the common elements that have characterized technical innovation in U.S. society and their potential use in education. In taking a case-study approach to the topic, students will conduct research on the relative success of, and societal/institutional reactions to, the various technologies. Students will also study failed technologies in an effort to understand what elements might have been missing. The course will culminate with each student developing their own measurement and assessment of a current "new" technology and develop a strategic plan as to how it might be pursued/implemented in their own school or district. This course is only open to students enrolled in the Sixth Year Certificate program in Educational Technology.

MD 0595 Independent Study **3-6 Credits**
Candidates complete individual study in educational technology with a faculty member after submitting a proposal for independent study prior to registration.

MD 0596 Leading and Supporting Educational Technology in K-12 Schools **6 Credits**
This course is designed to address the specific needs of educational technology professionals for K-12 technology leadership positions. The course will allow students to simultaneously examine both the issues and practices involved in managing technology operations and the technical knowledge required to implement, oversee, and contract for the services required to deliver tech-based learning. The course will lead students through such leadership topics as strategic planning, budgeting, professional development, legal and ethical issues, policy development, and team building, along with the technical concepts of networks, servers, devices and device management, security, and web services as needed to manage technical staff and successfully interact with technology providers. Students will also connect with a technology administrator or director to gain first-hand knowledge of the issues and challenges faced in the field.