EDUCATIONAL COMMUNICATIONS & TECHNOLOGY (EDCT-GE)

EDCT-GE 2015 User Experience Design (3 Credits)
Typically offered Fall
Examines cognitive & cultural issues related to the design of learning environments and educational tools. Students will apply human-centered design methods, UX and HCI principles including conducting user research, ideating, sketching, prototyping, and iterating based on user feedback. Students study these methods through group work, critical examination & evaluation of examples, in discussions, and individual assignments.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2018 Integrating Ed Tech in Teaching & Learning (1 Credit)
Typically offered Fall, Spring, and Summer terms
Prepares students to integrate digital media & technology into learner curricula. Through demonstrations, hands-on use, & application projects, students gain experience with the roles digital tools play to support teaching methods & learning strategies associated with a continuum of learner- & teacher-centered educational approaches & goals. Students develop skills in HTML, podcasting, digital storytelling, use of Web 2.0 tools (e.g., content management systems, social networks, e-portfolios), digital video, & virtual worlds in order to design and formatively assess engaging learning communities.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2031 Educational Technology in a Global Context (3 Credits)
Typically offered not typically offered
Educational technologies have become essential for international exchange as a 'leapfrog' technology for development, as a way of bridging distance in education, & as an important means for the preservation & dissemination of local cultures & contexts. Educational technology is a significant & growing force worldwide, & not only in industrialized nations. E-learning, open educational resources, m-learning, & educational media are transforming not only formal primary, secondary, & postsecondary education, but also rural economic development, agriculture, & women's empowerment. In this course, we look at how educational communications & technology shape, & are shaped by, their context internationally.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2040 Social Media in Learning Environments (SMILES) (3 Credits)
Typically offered Spring
This blended (classroom & online] course introduces students to some of the important topics when using social media in learning environments. Key controversial topics related to social media in learning environments are examined, such as: privacy versus sharing public learning content; individual versus collaborative learning; "traditional" learning versus knowledge-building communities; & social engagement/activism within interconnected learning communities. This course introduces students to the conceptual frameworks, research literature content, & ideation required for deeper engagement with emerging & future tools for work & play in socially mediated learning environments.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2076 Digital Skills for Learning Designers (1-3 Credits)
Digital technologies are now an integral part of the design of a growing number of learning experiences. Modern learning designers need to master several digital skills to effectively and efficiently embed these new technologies into their designs. Through modular and personalized learning paths, this course will provide practical training and practice to acquire basic skills in graphic design, multimedia production and interactive multimedia for novice students or to attain higher levels of mastery for students with previous experience.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: Yes

EDCT-GE 2095 Capstone Thesis (3 Credits)
Typically offered Fall, Spring, and Summer terms
This capstone thesis course gives students nearing graduation the opportunity to integrate and apply what they have gained through previous academic coursework and field experiences to major culminating projects while being supervised by ECT faculty members. Options for capstone thesis projects include design and development projects, research studies, and scholarly inquiry papers.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: Yes

EDCT-GE 2113 Learning Design for the Digital Age (3 Credits)
Learning designers must take the changing expectations of digital natives with extensive experience with social media, immersive media, and interactive video games and simulations into account in their approach to design. Topics include the dynamics of social media, participatory interactivity, the potential of information overload, peer-linkage processes, the special character of mobile technologies and social networking.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2114 Experience Design and Artificial Intelligence (3 Credits)
Analysis of the exponential expansion of digital communication and computation and the resultant impact on social interaction, cultural creation, education and business enterprise. Key topics include: artificial intelligence, machine learning, neural network architectures, natural language processing, viral information dynamics, interactive immersive displays, data mining and data analytics.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2116 EdTEch Entrepreneurship (3 Credits)
Typically offered not typically offered
This course is an introduction to entrepreneurship in education where students learn how to critically evaluate ideas, companies, and markets related to educational technology, especially in relation to some of the key problems and challenges of educating all people to their fullest potential. Students hear from guest experts, explore in-depth case studies, and do field work with companies in the NYU Edtech Accelerator. Students may also participate in a concurrent optional internship (permission of instructor required).
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2158 Design Process for Learning Experiences (3 Credits)
Typically offered Fall and Spring
Introduction to & application of major instructional design models, particularly as they relate to the development of instructional materials & resources for such technologies as computer-based multimedia, network telecommunications, & television. Models are compared for their substantive & procedural approaches to analyses of needs, content, instructional philosophy, learners, social environment, culture. Developments in the field & critical issues, including conflicts between objectivist & constructivist instructional design models, are addressed in historical perspective
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2159 Future of Learning Technology (3 Credits)
This course builds on the fundamentals of learning theory and interactive design by rethinking these issues in the context of dramatically evolving technology as well as new institutions and new social expectations about the learning process. A dominant theme is the tension between the relatively fixed limitations of the evolved human cognitive system and the dramatic changes in technology, institutions and social expectations.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2174 Foundations of Cognitive Sciences (3 Credits)
Typically offered Fall and Spring
Introduction to cognitive science applied to teaching, learning, and the design of instructional media. Readings include developments in cognitive science and analysis of instructional programs developed in a cognitive science framework. The design and implementation of cognitive learning and teaching strategies are examined through class demonstrations, discussions, online activities, readings and projects.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2175 Foundations of the Learning Sciences (3 Credits)
Typically offered Fall and Spring
This course focuses on the social and cultural issues of learning as they relate to individual and group cognition in the context of media-rich technology learning environments. The course delves deeply into constructivism/constructionism, scaffolding, apprenticeship, distributed cognition, computer-supported collaborative learning, knowledge-building communities, the learning sciences, perspectivity and identity formation as they relate to the creation of successful and equitable learning environments for diverse populations of learners.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2184 Tangible Electronics for Teaching and Learning (3 Credits)
The course combines theory and practice for researching, designing, and prototyping tangible educational technology. Students will gain experience applying theoretical frameworks for learning and design as they develop an educational experience with a client. Learners will analyze a learning context, conduct primary & secondary research, engage in ideation & prototyping, and iterate on their designs with stakeholders. Students will learn how to use microcontrollers to interface with sensors and actuators, in order to implement their designs and gain feedback.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2197 Media Practicum: Field Internships (1-3 Credits)
Typically offered Fall, Spring, and Summer terms
Students are placed in field internships in a variety of professions related to digital media design for learning including product development, user experience, instructional design, educational technology, media design and development and educational research. Students learn through supervised participation in professional settings including corporate, cultural, communications, non-profit, health, K-12 and higher education, among others.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: Yes

EDCT-GE 2200 Digital Design for Museum-based Learning (3 Credits)
Typically offered Spring
Examine digital media for learning in museums (e.g., XR, games, mobile apps, and more). Activities include hands-on exhibit design projects (group and individual), student presentations, museum visits, and case studies. Apply learning theories and design frameworks to analyze an existing museum exhibit, or design your own. Home skills in user research, rapid prototyping, public piloting, iterative design, and securing resources. Accept the challenge of stepping out of your academic comfort zone and developing your own professional success measure
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2211 Professional Applications of Educational Media and Technology (3 Credits)
Typically offered Fall
This course provides an overview of the broader field of educational media and technology with a focus on identifying personal and professional goals in relation to various career pathways and trends in the field. Through guest speakers, site visits, reflective learning, and research activities students will gain an appreciation for the types of qualifications, skills and mindsets related to various career pathways.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2223 Topics in Ed Tech: Tangible Electronics for Learning (3 Credits)
Steinhardt/Tandon joint course combines theory and practice for researching, designing, and prototyping tangible educational technology. Students conduct a practice-based research project, including analyzing a learning context, identifying learning objectives, conducting primary research, and working collaboratively with a client in the field to develop and iterate on their designs. Techniques for rapid prototyping, overview of physical computing, and using microcontrollers to interface with sensors and actuators to implement their designs and gain feedback.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2251 Introduction to Coding for Learning Designers (3 Credits)
Typically offered Fall
In this course, students will learn HTML, CSS, and Javascript while gaining hands-on experience with issues that are specific to coding and designing educational applications and web-based instructional materials. Students will learn the skills required to develop websites and design applications that work across devices. Furthermore, students will explore the affordances that the web and multimedia offers a learning designer, how to apply various perspectives on learning and how to build interactive prototypes and wireframes. No knowledge of programming is assumed.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2252 Theories and Principles of Learning Analytics (3 Credits)
Typically offered Spring
In this course, students acquire the knowledge and skills to be intelligent producers and consumers of learning analytics and data science in education. Students examine and assess data sources, perform analyses, and critically evaluate applications of data use in real-world educational situations. Students learn to select, analyze and interpret data to make an argument about learning; recognize the opportunities, challenges and concerns that such data use presents; and take an informed position on research, policy, and practice related to educational data science.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: Yes

EDCT-GE 2253 Ed Tech Studio: Creative Learning Design (3 Credits)
Students engage with concepts, theories, designs, and examples of learning experiences that may or may not be seen as “creative” by learners and stakeholders in China. Explores what creative learning might be in Chinese contexts through hands-on projects, qualitative data collection/analysis, and applications of theories of learning, design, and creativity to experiences and sites across the lifespan. Students create case studies which critique, problematize, and challenge traditional notions of creative learning and assembled into a shared online resource publication.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2260 Building Artificial Intelligence Applications for Education (3 Credits)
In this course, students develop the technical and computational skills needed to create artificial intelligence applications that respond to real educational needs. The course explores the computational approaches needed to design and use algorithms to capture and automatically analyze data produced during online or face-to-face learning activities and to implement applications that provide feedback to the stakeholders of the learning process. As part of the course, students independently create a prototype AI application to address a real educational need.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2300 Independent Study (1-3 Credits)
Typically offered Fall, Spring, and Summer terms
It should be noted that independent study requires a minimum of 45 hours of work per unitt. Independent study cannot be applied to the established professional education sequence in teaching curricula. Each departmental program has established its own maximum credit allowance for independent study. This information may be obtained from a student?s department. Prior to registering for independent study, each student should obtain an Independent Study Approval Form from the adviser.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: Yes

EDCT-GE 2310 Developing Mobile Apps for Learning (3-4 Credits)
Typically offered Summer term
Course is designed for researchers & designers interested in learning and design theory. Student will develop mobile apps for prototype learning experiences & be exposed to the fundamentals of JavaScript, AppFramework, Jquery, HTML/CSS,. Course will also focus on JavaScript libraries for mobile app development & other distribution options for app stores (i.e., Cordova). Students should have basic knowledge of HTML/CSS & some experience with JavaScript (i.e., knowing JavaScript is not required) or prior background in programming concepts (e.g., Actionscript).
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2350 Designing On-Line Learning in Higher Education (3 Credits)
Typically offered Spring
Designed for students interested in the evolving fields of online & technologically enhanced pedagogy in all academic & professional disciplines. Course focuses on post-secondary teaching & reviews the fundamental theories & best practices in online instruction including instructional design, assessment techniques, models of peer instruction, learning management systems, evaluating learning modalities, gamification, & interaction design
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2500 Games and Play in Education (3 Credits)
Typically offered Spring
Video games are becoming ever-present in educational settings, with classrooms incorporating both commercial & educational games in curriculum, & educational technologists becoming ever more interested in developing “serious” or educational games. However, there are still many unknowns, such as, what genres of games may best be used for certain kinds of learning, & how we can go about studying how games affect players & learners. This course will prepare students to: understand the history of educational video games, & what shaped the development of certain genres; identify theories of learning & play; & describe how they relate to the educational potential of video games; analyze & evaluate commercial & educational video games; & design educational video games with history, theory, learning outcomes, & learner characteristics in mind.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2505 Designing Simulations/Games for Learning (3 Credits)
Typically offered Fall
Examines the potential of various genres of simulation & games (both analog & digital) as learning technologies through readings, discussion, play, design, & research. Literacy, identity, genre, interactivity, play, story, emotions, presence, & information visualization are among the cultural & cognitive concepts covered in this course. Student-selected assignments typically include reflections on game & simulation play, integrating games & simulations in formal learning environments, designing & developing prototypes of educational games & simulations, & conducting short exploratory research.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2510 Narrative, Digital Media, and Learning (3 Credits)
Typically offered Fall and Spring
This course addresses the role of narrative when designing serious games, simulations, multimedia, emerging media, learning materials and social media. Narrative forms have been used for teaching and learning given their role in memory, cognition, the engagement of learners, as well as in case studies for learning, teaching, and research. This course explores the design principles and constitutive elements of narrative-centered learning through a variety of authoring tools and platforms.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2520 User Research Methods (3 Credits)
Typically offered Spring
Introduction to user research methods, using simulations, games, and other digital tools as products. Learn to choose the appropriate approach (user research, evaluation, or efficacy research) and methods (surveys, interviews, think-aloud protocols, video research, biometrics, user analytics, or A/B testing). Assignments, class discussions, and case studies are used to discuss the purpose, design, and setup of these methods and to prepare students to design and execute their own user research for a product of their choice.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2553 Ed Tech Studio: Co-designing Game Based Lrng Experiences (3 Credits)
Typically offered Summer term
Working with a real-world client and building on topics and skills covered in EDCT-GE 2015 User Experience Design, students will work collaboratively to imagine creative design solutions to emergent problems. Students will develop skills to understand, empathize & 'frame' client challenges & opportunities, develop and iterate on prototypes, and present solutions to problems and opportunities. Throughout the semester, students will engage with industry experts and explore a range of case studies.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 2554 Ed Tech UX Studio: Design for a Client (3 Credits)
Working with a real world client, students will work collaboratively on an integrated design project to imagine creative solutions to emergent problems, think critically, communicate effectively, & manage both human and material resources. On teams with graduate student peers, faculty, and external clients students will develop skills to understand, empathize & 'frame' client challenges & opportunities responsive to challenging times. Students will present solutions to problems and opportunities, and iterate based on feedback.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 3076 Advanced Seminar in Research and Practice in Educational Technology (3 Credits)
Typically offered Fall
In addition to developing the candidacy paper this course provides an overview of the profession. Students become familiar with the components of the candidacy paper & begin to research & develop information related to those components. Profession-related topics include vita construction, identifying & pursuing faculty positions in higher education, the major conferences & publications in the profession, the critical steps & major benchmarks in doctoral training & funding sources for doctoral research.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: Yes

EDCT-GE 3311 Doctoral Content Seminar (3 Credits)
Typically offered not typically offered
This seminar examines the challenge of artfully framing research questions and hypotheses and then matching them to appropriate qualitative and quantitative methodologies. In addition to common readings, students identify and individually research articles related to their research interests and critically assess the studies. The major task is to develop a research proposal that informs the direction of the student's candidacy papers and serves as an initial draft of their dissertation.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No

EDCT-GE 3312 Design-based Research Methods (3 Credits)
Research in education, technology, and other applied areas of social science often involves studying the combination of the properties of designed interventions and human behavior. This research methods course takes up design-based research methodology and some of its variants including social design experiments and design-based implementation research. Students learn both the epistemology of design-based research methods and techniques for conducting research with these methods, as well as studying when and why the methods are appropriate or inappropriate for particular aims.
Grading: Grad Steinhardt Graded
Repeatable for additional credit: No