**T- COURSES**

**T-002 Critical Race Theory in Education**  
*Daren Graves, Kimberly Truong*  
Fall course; four credits.

This course focuses on the epistemological, methodological, and pedagogical uses of Critical Race Theory (CRT) in the examination and deconstruction of race-based educational disparities and inequalities in K-12 and postsecondary education. The overarching goals of the course will be to examine the utility of CRT as a theoretical framework in (1) interrogating the factors that cause racial educational disparities; (2) exploring why inequalities exist and persist; and (3) determining sustainable remedies to these disparities and inequalities. We will begin by looking at CRT’s roots in Critical Legal Studies. We will then explore CRT’s more recent applications in the realm of education, which has its roots in examining the experiences of African Americans and others society deems as Black. In doing so, we will confront the intra- and interpersonal challenges and strengths of multiple socially constructed race groups by examining the branches of CRT that focus on people of color, including Latinos, Asians, and Native Indians, and the use of CRT to examine “Whiteness.” We will also investigate issues of epistemology and research methodology in CRT, which will ultimately be useful as we then examine the experiences of students of color in the K-12 and higher education realms through a CRT lens, and the potential uses of CRT in research, teacher education, and the teaching and learning process writ large.

*Students who have taken the module T-010A should not take this course.*

Wednesday, 4:00 - 7:00 p.m.

**T-006 Adult Development**  
*Robert Kegan*  
Spring course; four credits.

This course explores adulthood—the latter two-thirds to three-quarters of our lives—not as a single, last phase of human development but as itself an evolutionary expanse involving importantly different eras and transformations. Via lecture, film, large- and small-group activities, and conceptual and literary readings, the course is a context for considering a variety of theoretical and practical questions, including the following: What are the implications of various theories of adulthood for how we define “development,” “maturity,” and “wisdom”? Are there common features of the adult trajectory that apply across the diversities of gender, class, ethnicity? What are adults’ actual developmental capacities, and how do they square with the mental demands of modern life? What is the meaning of adult developmental theories for those who would be helpful to adults in contexts of work, schooling, staff development, conflict resolution, and counseling? Can we, and should we, intentionally seek to foster development in adulthood? Evaluation will be based on brief written exercises during the semester and a concentrated end-of-term paper.

*Required for Ed.M. students in the Language and Literacy Program’s Literacy Coach strand.*

Wednesday, Noon - 2:00 p.m. Required one-and-a-half-hour weekly section.

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**T-131 Teachers, Leadership, and Power: School Reform from the Classroom**  
*Katherine Boles*  
Spring course; four credits.

This course—designed for teachers, administrators, and policymakers—examines the formal and informal teacher leadership roles emerging in today’s schools. With teacher leadership initiatives burgeoning across the country, teacher leadership has become a “hot” topic in education. Accomplishing meaningful teacher leadership roles will be nearly impossible, however, unless teacher-leaders have a deep understanding of school culture and organization, the complex nature of power in schools, and the history of teaching. Course readings, class sessions, and assignments will address major issues that directly affect teacher-leaders, including new forms of high-stakes testing and teacher evaluation, pay for performance, the continuing problem of retaining the best teachers in the profession, and the implementation of the Common Core’s near-national curriculum standards. The three course assignments are directly connected to practice. Each student will study the experience of one teacher-leader, interviewing and shadowing that teacher for at least one day, and write a paper documenting that teacher’s situation and experience. Pairs of students will write a teacher-leadership case drawn from their own teaching experiences. Finally, a publishable op-ed piece will be written by each student, vetted by trios of peers and the professor, and submitted to a newspaper, educational journal, or blog four weeks before the end of the semester. These op-ed pieces, developed from each student’s perspective on a teacher-leadership or school-reform issue, will add teachers’ voices to the national debate on school reform and provide a capstone experience for the semester’s work.

Tuesday, 4:00 - 7:00 p.m.

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**T-139 Investigating Learning and Teaching through Close Collaborative Examination of Student and Teacher Work**  
*Tina Blythe*  
Spring course; four credits.

The most powerful source of information about teaching and learning in a school is the student and teacher work that occurs in classrooms, day in and day out. This course is about how to use that work to better understand learners and their learning, teachers and their teaching; and how to support the collegial collaboration that leads to better learning for both learners and educators in a school. We will focus on three specific tools: protocols (or structures for guiding reflection and discussion); documentation (ways of capturing student and teacher work so that it can be examined and discussed); and collaborative inquiry (working with colleagues to identify important questions about teaching and learning and then pursue those questions through the close examination of student and teacher work). All these tools, while developed primarily for use among teachers and administrators in a school, have proven useful with students in the classroom. We will consider the important challenges to doing this work in classrooms and schools: How do we learn to see beyond our own assumptions and expectations to what students are in fact learning? How do we understand
and manage tensions that often arise among colleagues when discussing issues as complex as learning and teaching? How do schools make space in already-crowded days for the reflections and conversations about student and teacher work? And how might one serve as an effective facilitator for examining student and teacher work with one’s colleagues? This seminar requires active participation as well as collaboration with classmates.

Must be taken satisfactory/no credit.

Tuesday and Thursday, 9:30 - 11:30 a.m.

T-202 *Foundations of Schooling and Teaching
Beth Simpson
Spring course; four credits.
The purpose of this course is to engage in an in-depth investigation of the work of teaching. The course is designed for students who intend to enter the profession of teaching for the first time. Specifically, we will look at teachers’ work in relation to students, the curriculum, and the school and the policy settings in which they are situated. This course strikes a balance between understanding focal topics from a theoretical and empirical perspective and investigating them from a practical, more hands-on approach. The latter is achieved through the frequent use of case studies, videos of teaching practice, and reference to students’ experiences in classroom settings.

Permission of instructor required. Enrollment is limited to 30; students currently involved in fieldwork in local school settings given preference. Required for students in the Undergraduate Teacher Education Program. Open to Ed.M. students. Enrollment procedure will be posted on the course website.

Monday, 4:00 - 7:00 p.m.

T-210A1 *Introduction to Teaching (English)
Karl Sineath
Summer 2013 module; two credits.
This module introduces Teacher Education Program candidates to core aspects of teaching that they will continue to examine in their Fall methods courses. Particular focus is on lesson planning (including examination of the relation among students’ learning needs, instructional goals, instructional strategies, and assessment) and the reflective skills necessary to examine and improve upon practice.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, Teacher Education Program students participating in the Cambridge-Harvard Summer Academy.

Class meets on Thursday, June 27; Monday, July 1; Friday, July 12; Tuesday, July 23; and Friday, July 26, 2:00 - 5:00 p.m.

T-210A2 *Introduction to Teaching (History/Political Science)
Rachel Otty
Summer 2013 module; two credits.
This module introduces Teacher Education Program candidates to core aspects of teaching that they will continue to examine in their Fall methods courses. Particular focus is on lesson planning (including examination of the relation among students’ learning needs, instructional goals, instructional strategies, and assessment) and the reflective skills necessary to examine and improve upon practice.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, Teacher Education Program students participating in the Cambridge-Harvard Summer Academy.

Class meeting June 27, 4:00 - 7:00 p.m.; and July 10, 16, and 23, 2:00 - 5:00 p.m.

T-210A4 *Introduction to Teaching (Science)
Victor Pereira, Jr.
Summer 2013 module; two credits.
This module introduces Teacher Education Program candidates to core aspects of teaching that they will continue to examine in their Fall methods courses. Particular focus is on lesson planning (including examination of the relation among students’ learning needs, instructional goals, instructional strategies, and assessment) and the reflective skills necessary to examine and improve upon practice.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, Teacher Education Program students participating in the Cambridge-Harvard Summer Academy.

T-210A3 *Introduction to Teaching (Mathematics)
Jon Star
Summer 2013 module; two credits.
This module introduces Teacher Education Program candidates to core aspects of teaching that they will continue to examine in their Fall methods courses. Particular focus is on lesson planning (including examination of the relation among students’ learning needs, instructional goals, instructional strategies, and assessment) and the reflective skills necessary to examine and improve upon practice.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, Teacher Education Program students participating in the Cambridge-Harvard Summer Academy.

Class meets on July 1, 12, 23, and 26, 2013; 2:00 - 5:00 p.m.

T-210A4 *Introduction to Teaching (Science)
Victor Pereira, Jr.
Summer 2013 module; two credits.
This module introduces Teacher Education Program candidates to core aspects of teaching that they will continue to examine in their Fall methods courses. Particular focus is on lesson planning (including examination of the relation among students’ learning needs, instructional goals, instructional strategies, and assessment) and the reflective skills necessary to examine and improve upon practice.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, Teacher Education Program students participating in the Cambridge-Harvard Summer Academy.

Class meets on July 1, 12, 23, and 26, 2013; 2:00 - 5:00 p.m.

T-210K *Power in Urban Classrooms
Marcus Walker
Summer 2013 module; two credits.
Prevailing discourses often describe urban public school teachers as “good” or “bad.” Yet simple labels such as “good teacher” or “bad teacher” mask the complexity of the work teachers do. Teachers manage at times competing commitments to their students and their families, the school institution, the broader society, and themselves. This work becomes ever more complex as teachers acknowledge that their own and their students’ cultural identities partly shape the political dynamics in their classrooms. In this module, we will focus primarily on the
which essays and essayists insinuate themselves into our lives features of a variety of essay genres. We’ll study the means by multiple opportunities to explore the lyrical and analytical on a long tradition of essay writing, and this course will provide delight readers. The best of today’s essayists and bloggers draw better as writers, as well as learn how to persuade, inform, and own written work, students will come to understand themselves more effective educators when they become confident writers. 

This module is designed to support teachers in developing a practical, effective, and low-stress approach to classroom management. The course focuses on a classroom management system with four components: classroom structure, limit-setting, responsibility training, and backup systems. Through course readings, reflective writing, class discussion, and simulations, participants will develop effective classroom management practices; break current “high-cost” and ineffective strategies; and establish a proactive, positive classroom setting that maximizes time on learning and minimizes classroom disruptions.

This module is designed for students who want to write more powerful, compelling, and thoughtful essays. Guiding this course is a belief that teachers, regardless of discipline, become more effective educators when they become confident writers. Through drafting, revising, and examining responses to their own written work, students will come to understand themselves better as writers, as well as learn how to persuade, inform, and delight readers. The best of today’s essayists and bloggers draw on a long tradition of essay writing, and this course will provide multiple opportunities to explore the lyrical and analytical features of a variety of essay genres. We’ll study the means by which essays and essayists insinuate themselves into our lives as readers and writers. Students will write about everything that is read and discussed in class, and will participate in small groups and workshops to discuss their writing.

T-210X Foundations of Urban Education

Meta Levinson

Winter module; two credits.

Urban schools are complex political constructs. Many actors from many different vantage points have tried to create, protect, reform, eliminate, and reassess them over time. In many cases, these efforts to shape urban schools reflect broader efforts to shape American schools in general; in other cases, urban schools have been the target of specific initiatives. Some of the most profound effects on urban schools have resulted from decisions that were ostensibly not about education at all: immigration, housing, and zoning regulations, for instance. It seems fair to say that the results for urban education have been mixed at best. Against this backdrop, and as a means of exploring the political and historical dynamics of urban educational institutions, we will investigate a single question over the course of the module; namely, how have people tried to achieve equity in urban schools over time? We will look at equity in attendance (including desegregation initiatives and dropout rates and policies); curriculum provision and pedagogy (including tracking, detracking, and differentiated instruction initiatives); school and district financing; teacher recruitment, support, and effectiveness; assessment and accountability measures; and school-family partnerships. By considering the relationship among intentions, school and social contexts, and outcomes with respect to these issues, students will gain important understandings that will help them be reflective and effective actors in a variety of urban educational contexts. Instructional methods include online e-lectures, whole-class and small-group discussion, simulations, case study, and other pedagogies.

Open to all interested students. Must be taken satisfactory/no credit.

Dates and times to be announced.

T-210Z1 Dimensions of Diversity: English Language Learners

Chad Leith

Yearlong module; two credits.

English language learners (ELLs) present a set of unique challenges to teachers in U.S. middle and high schools. This yearlong module introduces participants to a range of strategies and considerations for effectively meeting the social, emotional, and academic needs of adolescent ELLs. Drawing on current research and studies of effective practice, participants will gain an understanding of underlying theories and practical strategies that enhance the success of ELLs. We will examine the socio-emotional and sociocultural experiences of immigrant adolescents, the process of second language acquisition, and the stages of English proficiency development; and consider their implications for teaching and learning. Participants will also be introduced to the principles of effective sheltered English instruction (SEI) and will practice designing lessons, materials, and assessments that incorporate Sheltered Instruction Observation Protocol (SIOP) components and the World-Class Instructional Design and Assessment (WIDA) English proficiency standards.
Permission of instructor, the director of the Teacher Education Program, or the director of the Undergraduate Teacher Education Program required. Enrollment limited to students in the Teacher Education Program and the Undergraduate Teacher Education Program.

Class meets: Fall - September 25, October 23, and November 20, 2013; Wednesday, 1:00 - 4:00 p.m. Spring – January 29, February 26, March 26, and April 16, 2014, Wednesday, 4:00 – 7:00 p.m.

T-210Z2 *Elements of Diversity: Special Education
Christina Smiraglia

Summer 2013 module; two credits.

This module provides an introduction to special education and inclusion of students with disabilities in K-12 general education classrooms. Teachers are increasingly expected to teach a variety of learners, including students with disabilities. The 2004 reauthorization of the Individuals with Disabilities Education Act and the 2008 Higher Education Opportunity Act further expanded imperatives for general education teachers to understand disability, inclusion, and universal design. Course readings, class discussions, and in-class activities will focus on three primary goals: first, to provide an introduction to the roles of special education and inclusion in schools; second, to introduce basic theoretical and practical considerations for teaching inclusively; and third, to increase knowledge of general education teachers’ roles and responsibilities in the education of students with disabilities. Emphasis will also be placed on skills for collaborative networking and identifying resources in districts, schools, or classrooms.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, Teacher Education Program students participating in the Cambridge-Harvard Summer Academy.

June 17 - 21, 2013; times to be announced.

T-211J *Teaching and Learning with Objects
Christina Smiraglia

Spring module; two credits.

(New module.) Objects embody natural processes as well as human activity and are ubiquitous in our everyday lived experience. They can connect people, places, and ideas and are open to interpretation through a range of disciplinary lenses. This course invites students to begin examining the role of objects in learning and teaching across multiple contexts and audiences. Students will explore how the close examination of physical things can be the starting point for engaging learners in sophisticated and varied inquiry. Through readings, discussions, group work, and object experiences, students will investigate questions such as: What is object-based learning, and how does it compare to other forms of learning? What does research and theory from different disciplines tell us about object-based learning? How are object-based learning experiences designed? Students will engage in experiential object-based activities to gain a first-hand understanding of learning through objects, contextualized in the existing literature. The main project in the course requires students to work in small groups to design and implement an object-based learning experience for an audience of the group’s choosing. The course also incorporates reflective writing and a field trip. This is an introductory survey designed for students with an interest in thinking creatively about teaching and learning and is applicable for those working in any setting with any audience.

Permission of instructor required. Enrollment limited to 20. There are no prerequisites. See course website for application procedures. Offered only as Satisfactory/No Credit.

January 27 - March 10, 2014; Monday, 4:00 – 7:00 p.m.

T-212 *Teaching English
Karl Sineath

Fall course; four credits.

This course provides participants with an overview of the theory and practice of teaching English language arts to adolescents. Participants will formulate a working definition of English language arts; develop a scholar-practitioner approach to teaching; specify the essential skills and content of the discipline; design assessments that measure student learning; develop guidelines for selecting materials that support learning goals; integrate research, theory, and praxis to create effective educational experiences for students; analyze artifacts of practice to inform instructional decisions; and learn to build classroom experiences so that they interact to form cohesive units and yearlong courses. Course requirements include class preparation and participation, assessment design, lesson planning, analysis of student work, discussion facilitation, modeling of teaching strategies, and a unit project.

Permission of instructor required. Enrollment is limited. Required for English candidates enrolled in the Teacher Education Program or the Undergraduate Teacher Education Program. Enrollment procedure will be posted on the course website.

Wednesday, 4:00 - 7:00 p.m.

T-213 *Teaching History, Political Science/Political Philosophy, and/or Social Studies
Rachel Otty

Yearlong course; four credits.

This course offers an overview of the theory and practice of teaching history, civics, and social studies to adolescents in urban middle and secondary schools. Students taking this course will learn how to set meaningful learning and other developmental goals; integrate assessment and data analysis into daily teaching practice; develop a broad repertoire of teaching practices; make connections within and beyond the school walls; integrate middle- and high-school students’ experiences and beliefs into lessons and course design; use available technology effectively; draw on a variety of classroom management techniques; and design lessons, units, and courses that foster student learning and achievement in urban school settings. This course will also examine a variety of issues specific to history and social studies teaching, including use of primary sources, methods for fostering and managing conversations about contentious issues, current events integration, and the history of the “social studies wars,” among other topics.
T-214 *Teaching Mathematics
Jon Star

Fall course; four credits.

This course introduces participants to major issues, teaching strategies, resources, and technologies related to the teaching of middle- and high-school mathematics. The approach stimulates in-depth analyses that help address complex social problems. The specific goals of the course are threefold: to introduce students to a variety of ways of teaching by the case method through direct observation and discussion; to build students’ abilities to facilitate live case-based discussions, thereby expanding their own discussion toolbox; and to give students the opportunity to practice the craft of case-writing.

Wednesday, 4:00 - 7:00 p.m. There will be no class on September 4. A make-up class will be announced.

T-215 *Teaching Science
Victor Pereira, Jr.

Yearlong course; four credits.

This course provides an active instructional environment that fosters the development of teachers effectively prepared to meet the challenges of middle- and secondary-science classrooms. We will draw on the rich research base dealing with science teaching and student learning. We will explore various approaches to the teaching of specific topics and concepts in the content areas of earth and space sciences, life science, the physical sciences, and the nature of science, as well as strategies to assess them. Time will be spent examining exemplary curricula, resources, and relevant issues. Students will gain experience in designing and presenting research-based lessons and providing colleagues with critical feedback. Reflective practices will be emphasized.

Wednesday, 4:00 - 7:00 p.m. There will also be four dates to be announced in Spring 2014, 4:00 - 7:00 p.m.

T-234 *Teaching and Learning by the Case Method
Monica Higgins

Spring course; four credits.

This course is designed to enhance the toolbox of students who aspire to leadership and scholarly positions beyond HGSE. It is particularly suitable for doctoral students who are interested in expanding their own repertoire of teaching methods, although it is open to master’s students as well. In addition to learning how to teach by the case method, students will learn firsthand how this approach can benefit their own research and practice.

Permission of instructor required. Enrollment is limited. Required for history, political science/political philosophy, and social studies candidates enrolled in the Teacher Education Program or the Undergraduate Teacher Education Program. Enrollment procedure will be posted on the course website.

Wednesday, 4:00 - 7:00 p.m. Nine class sessions will be held during the Fall term, and four during the Spring.

T-300A *Practicum in Secondary Education (Mathematics or Science)
Katherine Merseth

Spring course; four credits.

T-300A provides candidates with supervised practice in the role of a secondary- or middle-school teacher of mathematics or science. Fieldwork, which is integrated into advisory and other required program coursework, includes teaching and assuming additional instructional responsibilities as outlined by the Teacher Education Program.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, mathematics and science candidates enrolled in the MidCareer Math and Science Program or the Teaching and Curriculum Program. Offers partial fulfillment of Massachusetts’s teaching licensure requirements.

Dates and times to be arranged.

T-300B *Practicum in Secondary Education (English, History, or Political Science/Political Philosophy)
Katherine Merseth

Spring course; four credits.

T-300B provides candidates with supervised practice in the role of a secondary- or middle-school teacher of English, history, or political science/political philosophy. Fieldwork, which is integrated into advisory and other required program coursework, includes teaching and assuming additional instructional responsibilities as outlined by the Teacher Education Program.
T-301A *Pre-Practicum in Secondary Education (Mathematics or Science)
Beth Simpson
Summer 2013 module; two credits.
(New module.) T-301A prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of mathematics or science. Fieldwork includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.
Permission of director of Undergraduate Teacher Education Program required. Enrollment is limited to, and required for, mathematics and science candidates enrolled in the Undergraduate Teacher Education Program. Offers partial fulfillment of Massachusetts’ teaching licensure requirements.
Dates and times to be arranged.

T-301B *Pre-Practicum in Secondary Education (English, History, or Political Science/Political Philosophy)
Beth Simpson
Summer 2013 module; two credits.
(New module.) T-301B prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of English, history, or political science/political philosophy. Fieldwork includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.
Permission of director of Undergraduate Teacher Education Program required. Enrollment is limited to, and required for, English, history, and political science/political philosophy candidates enrolled in the Undergraduate Teacher Education Program. Offers partial fulfillment of Massachusetts’ teaching licensure requirements.
Dates and times to be arranged.

T-301A *Pre-Practicum in Secondary Education (Mathematics or Science)
Beth Simpson
Fall module; two credits.
(New module.) T-301A prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of mathematics or science. Fieldwork includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.
Permission of director of Undergraduate Teacher Education Program required. Enrollment is limited to, and required for, mathematics and science candidates enrolled in the Undergraduate Teacher Education Program. Offers partial fulfillment of Massachusetts’ teaching licensure requirements.
Dates and times to be arranged.

T-301B *Pre-Practicum in Secondary Education (English, History, or Political Science/Political Philosophy)
Beth Simpson
Fall module; two credits.
(New module.) T-301B prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of English, history, or political science/political philosophy. Fieldwork includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.
Permission of director of Undergraduate Teacher Education Program required. Enrollment is limited to, and required for, English, history, and political science/political philosophy candidates enrolled in the Undergraduate Teacher Education Program. Offers partial fulfillment of Massachusetts’ teaching licensure requirements.
Dates and times to be arranged.

T-301A *Pre-Practicum in Secondary Education (Mathematics or Science)
Beth Simpson
Spring module; two credits.
(New module.) T-301A prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of mathematics or science. Fieldwork includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.
Permission of director of Undergraduate Teacher Education Program required. Enrollment is limited to, and required for, mathematics and science candidates enrolled in the Undergraduate Teacher Education Program. Offers partial fulfillment of Massachusetts’ teaching licensure requirements.
Dates and times to be arranged.
T-302A  *Practicum in Secondary Education
(Mathematics or Science)
Katherine Merseth

Fall course; four credits.

T-302A provides candidates with supervised practice in the role of a secondary- or middle-school teacher of mathematics or science. Fieldwork, which is integrated into other required program coursework, includes teaching and assuming other clearly defined instructional responsibilities in a classroom, working closely with school practitioners, and participating in a site-based advisory seminar.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, mathematics and science candidates enrolled in the Undergraduate Teacher Education Program. Prerequisite: T-301A. Offers partial fulfillment of Massachusetts teaching licensure requirements.

Dates and times to be arranged.

T-302B  *Practicum in Secondary Education
(English, History, or Political Science/Political Philosophy)
Katherine Merseth

Spring course; four credits.

T-302B provides candidates with supervised practice in the role of a secondary- or middle-school teacher of English, history, or political science/political philosophy. Fieldwork, which is integrated into other required program coursework, includes teaching and assuming other clearly defined instructional responsibilities in a classroom, working closely with school practitioners, and participating in a site-based advisory seminar.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, English, history, and political science/political philosophy candidates enrolled in the Undergraduate Teacher Education Program. Prerequisite: T-301B. Offers partial fulfillment of Massachusetts teaching licensure requirements.

Dates and times to be arranged.

T-302A  *Practicum in Secondary Education
(Mathematics or Science)
Katherine Merseth

Spring course; four credits.

T-302A provides candidates with supervised practice in the role of a secondary- or middle-school teacher of mathematics or science. Fieldwork, which is integrated into other required program coursework, includes teaching and assuming other clearly defined instructional responsibilities in a classroom, working closely with school practitioners, and participating in a site-based advisory seminar.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required for, mathematics and science candidates enrolled in the Undergraduate Teacher Education Program. Prerequisite: T-301A. Offers partial fulfillment of Massachusetts teaching licensure requirements.

Dates and times to be arranged.

T-302B  *Practicum in Secondary Education
(English, History, or Political Science/Political Philosophy)
Katherine Merseth

Fall course; four credits.

T-302B prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of English, history, or political science/political philosophy. Fieldwork, which is integrated into advisory and other required program coursework, includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required of, students in the Teacher Education Program. Offers partial fulfillment of Massachusetts teaching licensure requirements.

Dates and times to be arranged.

T-310A  *Pre-Practicum in Secondary Education
(Mathematics or Science)
Katherine Merseth

Fall course; four credits.

T-310A prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of mathematics or science. Fieldwork, which is integrated into advisory and other required program coursework, includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required of, students in the Teacher Education Program. Offers partial fulfillment of Massachusetts teaching licensure requirements.

Dates and times to be arranged.

T-310B  *Pre-Practicum in Secondary Education
(English, History, or Political Science/Political Philosophy)
Katherine Merseth

Fall course; four credits.

T-310B prepares candidates to undertake their practica in the role of a secondary- or middle-school teacher of English, history, or political science/political philosophy. Fieldwork, which is integrated into advisory and other required program coursework, includes observing, assisting, and teaching as well as other instructional responsibilities in a variety of educational settings.

Permission of director of Teacher Education Program required. Enrollment is limited to, and required of, students in the Teacher Education Program. Offers partial fulfillment of Massachusetts teaching licensure requirements.

Dates and times to be arranged.
T-330A *School Instructional Leadership: Seminar and Practicum (Elementary-School Level)
Mary Russo

Yearlong course; eight credits.

The primary goal of this yearlong course is to prepare students for principal licensure and for school leadership roles in district, charter, pilot, and private schools as well as other educational organizations. The course emphasizes the conceptual framework and skills, as well as the values and beliefs, school leaders need to develop in order to create and manage schools and organizations that continually strive to improve instruction and increase student learning for all students. Students who complete the course should expect to have mastered the following skills: how to set up and manage operational systems to ensure that the school as an organization runs well, continually engages in practices that concentrate on increasing the quality of instruction and student learning for all students, and positions itself as a school to thrive in the future; how to analyze and use multiple sources of data about student performance to improve instruction and student achievement for all learners; to use instructional improvement and increased student achievement for all learners; how to engage parents and the community in supporting student learning; how to plan and implement schoolwide programs, including shelter content and scaffolded instruction, for English language learners to ensure language mastery; how to recruit, hire, and support instructional staff; and how to prepare personal entry plans for school leadership positions in district, charter, private, and pilot schools as well as other educational organizations. In addition, students are expected to engage in the ongoing process of developing and refining values and beliefs that support instructional improvement and high levels of learning for all students; to understand and support best practices for sheltering content for and teaching academic language to English language learners; and to increase their understanding of how individual schools and educational organizations operate within the context of overarching district, charter, pilot, and private school goals for improved student achievement.

Permission of instructor required. Required for Ed.M. students in the School Leadership Program Principal Licensure strand. Students in the School Development strand are required to take Fall semester only. Doctoral students admitted with permission. Enrollment procedure will be posted on the course website.
Wednesday, 5:00 - 8:00 p.m.

T-330B *School Instructional Leadership: Seminar and Practicum (Middle-School Level)
Mary Russo

Yearlong course; eight credits.

The primary goal of this yearlong course is to prepare students for principal licensure and for school leadership roles in district, charter, pilot, and private schools as well as other educational organizations. The course emphasizes the conceptual framework and skills, as well as the values and beliefs, school leaders need to develop in order to create and manage schools and organizations that continually strive to improve instruction and increase student learning for all students. Students who complete the course should expect to have mastered the following skills: how to set up and manage operational systems to ensure that the school as an organization runs well, continually engages in practices that concentrate on increasing the quality of instruction and student learning for all students, and positions itself as a school to thrive in the future; how to analyze and use multiple sources of data about student performance to improve instruction and student achievement for all learners; how to use teacher supervision, evaluation, and follow-up as a lever for instructional improvement; how to manage resources—people, time, money, job descriptions, district and community opportunities—and the budget development process to support instructional improvement and increased student achievement for all learners; how to engage parents and the community in supporting student learning; how to plan and implement schoolwide programs, including shelter content and scaffolded instruction, for English language learners to ensure language mastery; how to recruit, hire, and support instructional staff; and how to prepare personal entry plans for school leadership positions in district, charter, private, and pilot schools as well as other educational organizations. In addition, students are expected to engage in the ongoing process of developing and refining values and beliefs that support instructional improvement and high levels of learning for all students; to understand and support best practices for sheltering content for and teaching academic language to English language learners; and to increase their understanding of how individual schools and educational organizations operate within the context of overarching district, charter, pilot, and private school goals for improved student achievement.

Permission of instructor required. Required for Ed.M. students in the School Leadership Program Principal Licensure strand. Students in the School Development strand are required to take Fall semester only. Doctoral students admitted with permission. Enrollment procedure will be posted on the course website.
Wednesday, 5:00 - 8:00 p.m.

T-330C *School Instructional Leadership: Seminar and Practicum (High-School Level)
Mary Russo

Yearlong course; eight credits.

The primary goal of this yearlong course is to prepare students for principal licensure and for school leadership roles in district, charter, pilot, and private schools as well as other educational organizations. The course emphasizes the conceptual framework and skills, as well as the values and beliefs, school leaders need to develop in order to create and manage schools and organizations that continually strive to improve instruction and increase student learning for all students. Students who complete the course should expect to have mastered the following skills: how to set up and manage operational systems to ensure that the school as an organization runs well, continually engages in practices that concentrate on increasing the quality of instruction and student learning for all students, and positions itself as a school to thrive in the future; how to analyze and use multiple sources of data about student performance to improve instruction and student achievement for all learners; how to use teacher supervision, evaluation, and follow-up as a lever for instructional improvement; how to manage resources—people, time, money, job descriptions, district and community opportunities—and the budget development process to support instructional improvement and increased student achievement for all learners; how to engage parents and the community in supporting student learning; how to plan and implement schoolwide programs, including shelter content and scaffolded instruction, for English language learners to ensure language mastery; how to recruit, hire, and support instructional staff; and how to prepare personal entry plans for school leadership positions in district, charter, private, and pilot schools as well as other educational organizations. In addition, students are expected to engage in the ongoing process of developing and refining values and beliefs that support instructional improvement and high levels of learning for all students; to understand and support best practices for sheltering content for and teaching academic language to English language learners; and to increase their understanding of how individual schools and educational organizations operate within the context of overarching district, charter, pilot, and private school goals for improved student achievement.

Permission of instructor required. Required for Ed.M. students in the School Leadership Program Principal Licensure strand. Students in the School Development strand are required to take Fall semester only. Doctoral students admitted with permission. Enrollment procedure will be posted on the course website.
Wednesday, 5:00 - 8:00 p.m.
ensure that the school as an organization runs well, continually engages in practices that concentrate on increasing the quality of instruction and student learning for all students, and positions itself as a school to thrive in the future; how to analyze and use multiple sources of data about student performance to improve instruction and student achievement for all learners; how to use teacher supervision, evaluation, and follow-up as a lever for instructional improvement; how to manage resources—people, time, money, job descriptions, district and community opportunities—and the budget development process to support instructional improvement and increased student achievement for all learners; how to engage parents and the community in supporting student learning; how to plan and implement schoolwide programs, including shelter content and scaffolded instruction, for English language learners to ensure language mastery; how to recruit, hire, and support instructional staff; and how to prepare personal entry plans for school leadership positions in district, charter, private, and pilot schools as well as other educational organizations. In addition, students are expected to engage in the ongoing process of developing and refining values and beliefs that support instructional improvement and high levels of learning for all students; to understand and support best practices for sheltering content for and teaching academic language to English language learners; and to increase their understanding of how individual schools and educational organizations operate within the context of overarching district, charter, pilot, and private school goals for improved student achievement.

Permission of instructor required. Required for Ed.M. students in the School Leadership Program Principal Licensure strand. Students in the School Development strand are required to take Fall semester only. Doctoral students admitted with permission. Enrollment procedure will be posted on the course website.

Wednesday, 5:00 - 8:00 p.m.

T-402 *Group Learning
Daniel Wilson
Fall course; four credits.

Learning in groups is an essential component of school life for students, teachers, and administrators. One needs to look no further than the current emphasis on cooperative learning, teacher learning communities, and collaborative leadership models. However, socially appealing these labels seem, the unfortunate fact remains that groups are often a frustrating and ineffective learning experience for many of their members. Very few groups do well at sharing ideas, making decisions, and building new knowledge. Even fewer are able to break from routine behaviors and craft new practices. Why is this, and how can those who lead learning environments create the conditions to better support group learning? This course will familiarize participants with key research findings on the nature of group learning and will offer several occasions for participants to apply the concepts in practice by designing and observing group learning experiences. The course will examine and compare seminal lessons culled from the classroom literature, teacher and leader development, and the wider field of team learning and performance. Each week will focus on written and video cases of learning in K-12 classrooms, teachers collaborating in teams, or school administrators learning together. To illuminate the inherent social paradoxes of learning in groups, participants will engage in several experiential exercises as well as examine other contexts such as hospital teams, musical orchestras, and extreme athletic teams. In sum, participants will build an awareness of key insights so they can better diagnose and support group learning in a variety of contexts.

Permission of instructor required. Enrollment is limited to 35; Ed.M. students in the Learning and Teaching Program given preference. Students from other programs and schools are welcome so that the class will have a diverse set of professional interests. Enrollment procedure will be posted on the course website.

Friday, 9:00 a.m. - Noon.

T-405 Social Dimensions of Teaching and Learning
Hunter Gehlbach
Fall course; four credits.

Education is a fundamentally social enterprise. On a daily basis, educators face a myriad of decisions that shape the social dynamics of the learning environments in which they teach. Should a teacher offer choices among homework assignments, or would students be more motivated if they were rewarded for doing their homework? Should a curriculum designer develop collaborative activities for students, or will that result in the “smart kids” ending up doing all the work? By themselves, these decisions may seem trivial, but in aggregate, they exert a potent impact on the educational climate. A wealth of research from social and educational psychology speaks to these social aspects of educational settings. Unfortunately, few educators are exposed to this work. The goal of this course is to provide that exposure to teachers, school leaders, and researchers. The course will examine four areas: perceiving one’s self, perceiving others, social motivations, and interpersonal relationships. The learning environments examined will focus primarily on school settings and will extend to the contexts of interests of students in the class.

Prerequisite: While some background in psychology is beneficial, no prior coursework in psychology required.

Thursday, 1:00 - 4:00 p.m.

T-407 Teaching and Learning across the Curriculum
Jon Star
Fall course; four credits.

This course explores the learning and teaching of content areas that are typically taught in U.S. schools, particularly mathematics, reading, and science. The course is centrally concerned with two questions: First, what does it mean to learn school subjects? Second, what makes instruction effective in school subjects? The course considers learning and teaching from within each school subject, with special emphasis on ways that instruction in one content area is similar or different from instruction in another content area. Given the different histories, epistemologies, and learning challenges of each content area, the course seeks to move beyond general principles of effective instruction to take into account the particular nature of disciplinary learning and teaching. Although the primary emphasis of the course will be on the learning and teaching of mathematics, science, and reading, students are welcome to explore other school subjects.
The need to foster creativity and innovation has long been a priority in the educational, corporate, and political spheres. Today, with the proliferation of FabLabs, iLabs, 3-D printers, and “maker” spaces in schools and after-school programs, the push to develop curricular structures that support creativity and innovation is greater than ever before. Despite this need, there is a lack of clarity amongst educators and policymakers over what “creativity” and “innovation” even mean. Whether in STEM subjects or the arts, many educators enter their studios, classrooms, and lab spaces without a firm enough grasp on the scholarship that underpins creativity and innovation studies and a concrete sense of what teaching for creativity and innovation looks like. This course module will introduce students to an array of creativity and innovation theories to develop a deeper understanding of these concepts, grounded in scholarly literature. Concurrently, students will be presented with case studies of learning environments that hold creativity and/or innovation as core outcomes. A variety of pedagogical approaches (small group discussion, hands-on work with tactile materials, the use of digital media) will be employed during class sessions wherein students will discuss both the theories and learning environments under review. As a final project, students will establish their own definitions of creativity and innovation while also developing a sketch for a curriculum (or a series of lesson plans) that promotes their articulation of creativity and innovation in the content areas of their choice.

T-440 Teaching and Learning: “The Having of Wonderful Ideas”
Lisa Schneier
Fall course; four credits.

“Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other” (Paulo Freire, Pedagogy of the Oppressed). This course seeks to bring a Freirean approach to teaching situations by valuing the learners’ experiences and insights. Rather than conceiving of teaching as explaining, and learning as listening, this course looks at situations where teachers listen and learners do the explaining. The course starts from the premise that there are endless numbers of adequate pathways for people to come to understand subject matters. Curriculum and assessment must build on this diversity. A second premise is that every person can get involved with, and enjoy and get good at, every subject matter. “[An educator’s] efforts must be imbued with a profound trust in people and their creative power” (Pedagogy of the Oppressed). The method is appropriate for doctoral research in various aspects of teaching and learning. The course is designed to help teachers think about engaging people, and helping them learn, in a variety of subject matter. It is relevant for teachers of any subject matter, with any amount of experience, teaching people of any age (2 to 102), teaching in any setting—public schools, offices, museums, basketball courts, wherever one might want to help someone learn. Weekly reports, journals, and a final paper are required.

T-440A Fostering Creativity and Innovation through Education: Applying Theory to Practice
Edward Clapp
Fall module; two credits.

(New module.) The need to foster creativity and innovation has long been a priority in the educational, corporate, and political spheres. Today, with the proliferation of FabLabs, iLabs, 3-D printers, and “maker” spaces in schools and after-school programs, the push to develop curricular structures that

Appropriate for both master’s and doctoral students.

Wednesday, Noon - 3:00 p.m.

T-409 Teams in Schools and School Districts: The Potential and the Challenge
Katherine Boles
Spring course; four credits.

This course is designed for teachers and administrators in grades PreK-12 who wish to learn how well-functioning school teams (both teaching and administrative teams) can be established and maintained in today’s evolving education climate. While the popular idea of creating teams in schools seems relatively simple, most teachers and administrators would admit that they have rarely experienced teams that function effectively for the purpose of systematically improving instruction and increasing student learning. In this course, we will study both the cultural and the structural issues that prevent the development of successful school teams, and highlight the importance of developing accountability among all team members for the improvement of teaching and learning. The course is largely case-based, using both videotaped and written cases of school-level teams to address the dilemmas and issues that are frequently raised for teachers and administrators who work in teams. The cases and case analyses, supplemented by the most recent literature on teams in schools and other organizations, will provide a theoretical understanding of school teams and introduce specific skills that teams must acquire in order to function most effectively. In addition, pairs of students will teach one of the cases from The Power of Teacher Teams (Troen and Boles, 2012). All students, working in teams, will make three visits to a local school to study teacher and administrative teams and the school culture and context within which they function. These visits will be followed by a class presentation by the group and an individually written paper that analyzes the many facets of teacher and school leadership teams.

Thursday, 5:00 - 8:00 p.m.

T-410A Fostering Creativity and Innovation through Education: Applying Theory to Practice
Edward Clapp
Fall module; two credits.

(New module.) The need to foster creativity and innovation has long been a priority in the educational, corporate, and political spheres. Today, with the proliferation of FabLabs, iLabs, 3-D printers, and “maker” spaces in schools and after-school programs, the push to develop curricular structures that
T-522  Innovation by Design: Projects in Educational Technology  
David Dockterman  

Fall course; four credits.  

In this course, students experience firsthand the research-based design process with their own technology-based project. They will start with an education-related problem of their choice—past projects have tackled everything from fostering student creativity to supporting poorly educated hospital patients to teaching vocabulary or negative numbers. Working in small groups of shared interest, students will investigate the research, practice, and theories that suggest causes of and ways to address the problem. They will use the research as a spark for developing an innovative idea that incorporates appropriate uses of technology (computers, mobile devices, TV, game consoles, etc.) as needed for the project's targeted audience and context (school classroom, museum exhibit, corporate office, home entertainment area, subway, or wherever). In an iterative cycle, students will test and revise their idea with wireframes and prototypes, gather feedback, make revisions, and prepare a final presentation to share their findings and progress. This course takes students through the entire design and prototyping process in a supportive environment. Lectures and class presentations will dissect the creative and development steps using existing products and the students' own projects. Studio/lab times (using a mix of prototyping and development tools) will be devoted to supporting the creation of project prototypes and to give students a hands-on feel for software implementation. Projects from T-522 can be considered for further development in the Spring in T-581.  

No programming experience necessary.  

Friday, 8:30 - 10:30 a.m. and 10:30 a.m. - 12:30 p.m.

T-523  *Formative Evaluation for Educational Product Development  
Christine Reich  

Spring course; four credits.  

Formative evaluation is an assessment process used to improve the quality and development of almost any type of program or product. This course is designed for teachers, producers, researchers, museum educators, and educational product developers interested in methodologies and issues related to the evaluation of educational products. Students can expect to learn how to identify design objectives; gain insights into how market research works; write effective and productive questions; gather data on user feedback; systematically analyze data; and convey findings to colleagues, development teams, and funders. Through problem-based instruction, students will focus on one of two preselected projects. Past projects have included an IMAX movie (Jane Goodall’s Wild Chimpanzees, Science Museum of Minnesota), museum exhibits (e.g., Jasper Johns to Jeff Koons, Museum of Fine Arts, Boston), television programs (e.g., DragonflyTV, Twin Cities Public Television), and Internet sites (e.g., Time Warp Trio, WGBH). Students will identify the goals of the project, create an evaluation instrument to assess these goals, observe behaviors and gather user feedback, and convey the findings through both a written and an oral report. Although projects vary, the skills are applicable across disciplines and to nontechnology projects as well. Enrollees in the course have included curriculum developers, television producers, physicians, businesspersons, teachers, museum exhibit developers, moviemakers, and website designers.  

Permission of instructor required. Enrollment procedure will be posted on the course website.  

Friday, 9:00 a.m. - Noon.

T-525  Realizing the Potential of Online Professional Development  
Barbara Treacy  

Fall course; four credits.  

(New course.) Online technologies provide powerful new opportunities for educator learning that can address the limitations of traditional forms of teacher professional development, provide high quality access to content and colleagues without the constraints of time or place, and prepare educators with digital learning experiences that help them understand and incorporate the transformative power of connected teaching into their practice. How do educators design and implement effective online learning programs to meet these goals? This course explores the potential of online and blended professional development models for K-12 educators, with ancillary examples related to student online learning. The course is based on illustrative cases showing how these opportunities – and related challenges – have shaped online and blended implementations in EDC’s EdTech Leaders Online and other professional development programs. Issues considered in the course include: What principles should guide the design and balance of online and blended content? How does online professional development enhance teachers’ content knowledge and pedagogical practices? What preparation do educators need to facilitate online learning for their colleagues? How are online learning communities built and sustained? What administrative supports and infrastructure are needed? How are access and equity addressed? How do online options enable scalability? Which online tools, applications, and social media support various types of learning?  

Thursday, 5:00 - 8:00 p.m.

T-530  [Designing and Producing Media for Learning]  
Joseph Blatt  

Not offered in 2013-2014.  

This seminar is intended to encourage and support students who wish to sample the experience of producing educational media materials. Each student will have the opportunity to design, produce, test, and revise his or her unique project. Most full-scale media projects are collaborative efforts in which a team undertakes a series of coordinated activities, including content and audience research, creative design, production of pilot materials, formative testing, and redesign. To explore this process, students in the course will meet as a “production team” to review, critique, and advance one another’s projects. Through readings, screenings, and discussions with practitioners, we will come to grips firsthand with issues of conceptualizing, designing, fashioning, and evaluating media projects. We will explore
several analytic frameworks drawn from both instructional design and informal education research. For their individual projects, students may design and produce for television, multimedia, the web, mobile applications, video games, radio, photography, or other formats.

**T-543 Applying Cognitive Science to Learning and Teaching**  
*Tina Grotzer*  
Spring course; four credits.

This course explores specific principles from cognitive science that have important implications for instructional approach and curriculum design. It considers how recent research findings on topics such as transfer, analogy, metacognition, conceptual change, explanation, mental models, novice-expert shifts, causal reasoning, and the nature of beliefs about intelligence interact with instructional design choices. It investigates current thinking on how findings from cognitive development research impact teaching and learning. Discourse ranges from learning theory to grounded classroom examples, focusing on examples that elucidate both how theory and research inform practice and how practice informs research questions and broader theory. There will be weekly readings. Class format will include activities, discussion, and brief lectures. The course has a project-based component. Students will complete a term project, typically the development of a curriculum topic, the choice of which is based on individual interest. Weekly workshop-style sections will support students in applying class concepts to their project topic.

Friday, 9:00 a.m. - Noon. Required one-hour weekly section to be arranged.

**T-545 Motivation and Learning: Technologies That Invite and Immerse**  
*(formerly titled Engagement and Learning: Technologies That Invite and Immerse)*  
*Christopher Dede*  
Spring course; four credits.

There is no learning without engagement, but engagement without learning is all too prevalent in today’s digital world. This course explores the relationship between technology, engagement/motivation, and learning. Media have long been employed to create learning environments that excite students’ enthusiasm. Recently, interest has grown in the area of video games and learning, with the argument that games and immersive simulations (1) motivate students who otherwise are uninterested in academic content, and (2) engage learners in rich virtual or augmented environments that provide a powerful context for acquiring useful knowledge and skills. But just because a student is deeply engaged in a task, does that necessarily mean that she or he is learning something of value? To date, little attention has been paid to how and what students learn from experiences made engaging by technology, such as video games. T-545 examines technology-based examples of “engaging” learning experiences, such as video games and other “immersive” media, as well as research and evaluation designs used to study the educational effectiveness of these environments. The course speaks to a wide range of interests about learning and engagement in various types of educational settings across a spectrum of learners. T-545 will build participants’ knowledge about theories of motivation and of learning, the extent to which technology-based games and simulations exemplify those theories, and the methods and findings of research in this area. Occasional lab sessions will focus on technical support, discussion, and special topics. Students are required to participate in virtual learning experiences and to complete assignments that can be customized to individual preferences and can include participation in research projects.

*No prior background in technology or gaming necessary.*

Monday, 10:00 a.m. – Noon and 2:00 - 4:00 p.m.

**T-550 Designing for Learning by Creating**  
*Karen Brennan*  
Fall course; four credits.

Young people are surrounded by interactive media. Most of their engagement with this media, however, is as consumers—pointing, clicking, watching, browsing—rather than as creators—designing, making, constructing, producing. In this course, we will (1) investigate the theoretical foundations of learning by creating, and (2) explore how to design learning experiences and technologies that support creating interactive media. Topics will include constructivist and constructionist theories of learning, the role of digital and physical materials in learning, how interest and motivation support learning, the social nature of learning, and reflective learning practices. Our investigations and explorations will be supported through readings, as well as hands-on experimentation with (and critical analysis of) construction-oriented learning experiences. Students will participate in class discussions about readings and take turns facilitating a portion of class time, which will involve selecting an additional reading and/or preparing an in-class activity that explores the theme of the week. Additionally, students will develop a project related to the theme of “designing for learning by creating”; for example, proposing a new technology/experience, developing curricular resources for an existing technology/experience, or analyzing an existing technology/experience. The project should be connected to both the course themes and student interests. Anyone who is interested in exploring the theory and practice of learning through designing, producing, making, and creating is encouraged to enroll.

*No prior experience with technology or design-based approaches to learning is required.* Students must attend the first class on September 10, 2013, to enroll in this course.

Tuesday, 8:30 - 11:30 a.m.

**T-553 Teacher Learning and Technology**  
*Karen Brennan*  
Spring course; four credits.

In conversations about the growing role that technology plays in the lives and learning of young people, teachers are often left out of the discussion (e.g., obsolesced by narratives of “digital natives”) or brought into the discussion in problematic ways (e.g., framed as impediments to the self-directed learning made possible by network technologies). We know, however, that students are not entirely self-managing with respect to technology and can benefit from teacher guidance, which ne-
cusses teacher familiarity and fluency with technology. In this course, our focus is on developing understandings of—and designing support for—teachers’ experiences with technology by examining questions that engage the multiplicity of issues surrounding teachers and technology. What should teachers learn about technology? How are teachers’ roles in learning reconceptualized by technology? How are teachers’ opportunities for learning supported by technology? We will explore these and other questions through readings, guest speakers, the critical analysis of learning technologies, and conversations with teachers about their technology experiences. Students will participate in class discussions about readings and also co-facilitate class time, which will involve selecting additional readings and/or preparing an in-class activity. Additionally, students will develop a project related to “teacher learning and technology”; for example, developing case studies of educators’ experiences with technology, or developing curricular resources to support teacher learning with/through technology.

Anyone interested in exploring the challenges and opportunities that teachers experience in the digital era is encouraged to enroll. Students must attend the first class on January 28, 2014, to enroll in this course.

Tuesday, 10:00 a.m. - 1:00 p.m.

**T-560 *Universal Design for Learning: Meeting the Challenge of Individual Differences***

_David Rose_

Spring course; four credits.

The challenge of individual differences faces every teacher, administrator, and curriculum designer. To meet that challenge, educators are typically equipped with media and materials that are “one size fits all” and that have been designed primarily for a narrow and illusive group of “regular” students. In this course, we will explore an alternative approach—universal design for learning (UDL)—that creates curricula and learning environments that are designed to achieve success for a much wider range of student abilities and disabilities. To do that, the UDL approach takes advantage of advances in two fields: (1) the cognitive neuroscience of learning and individual differences and (2) the universal design of educational technologies and multimedia. This course will explore recent advances in both of these fields through appropriate readings and through media construction exercises designed to prepare and support participants to meet the challenge of individual differences through universal design for learning. Students will work in teams on learning environments that are an expression of UDL.

Permission of instructor required. Enrollment is limited to 50. Prerequisite: Significant background in cognitive or affective neuroscience, technology design, or teaching required. Enrollment procedure will be posted on the course website.

Friday, 1:00 - 4:00 p.m.

**T-561 Transforming Education through Emerging Technologies***

_Christopher Dede_

Fall course; four credits.

As discussed in the National Educational Technology Plan 2010, which will serve as a framework for this course, emerging technologies have capabilities (e.g., supporting distributed cognition, situated learning, pattern-based assessment, psychological immersion, modeling, and visualization) that enable sophisticated and powerful forms of learning, at scale and not requiring personal heroism by teachers. T-561 is suitable for students in any academic program who wish to develop greater knowledge about the ways emerging technologies can both empower learning in and out of classrooms and transform industrial-era educational structures. The course presumes only a basic familiarity with computers, and extensive support is provided for learning the specific applications used in class. T-561 emphasizes the theory, instructional design, and assessment strategies underlying the development and application of new interactive educational tools, applications, media, and infrastructures, seen through the lens of design-based research. We will discuss the likely evolution of innovations such as immersive interfaces, digital teaching platforms, social media, and mobile learning. We will also examine challenges to educational equity posed by emerging technologies and strategies for overcoming these problems. In addition, we will discuss ways to overcome barriers in using sophisticated learning technologies to transform learning, teaching, and schooling, given the current context of education practice and policy, including examining disruptive theories of innovation. Lab/section sessions will focus on technical support, discussion of research methods, and special topics. Students will participate in virtual learning experiences and will complete assignments that can be customized to individual preferences and can include participation in research projects.

No prior background in technology necessary.

Monday, 10:00 a.m. - Noon. Required 90-minute weekly section, Monday, 2:00 - 3:30 p.m.

**T-565 Entrepreneurship in the Education Marketplace***

_John Richards_

Spring course; four credits.

Education is a $4 trillion global market. Most of the money is spent on salaries and operations, and the market challenges are considerable. Overlapping government agencies regulate the market, success is measured by a torrent of student tests, and there is a universal expectation of high quality at low cost. Funding and political constraints differ from country to country, from state to state, and even from city to city. These challenges present opportunities for creative entrepreneurship, operating from Pre-K through higher education, from within and outside the system, and from for-profit and nonprofit business models. This course examines how to identify market opportunities and how to create dynamic market research and pragmatic planning in order to “scale up” or “disseminate” beyond a few early adopters. Creative entrepreneurs establish new products or services through a careful analysis of market conditions and buying patterns and an implementation plan that effectively leverages available sources of funding. From the beginning of the course, students will engage in active market research working individually and in teams to analyze segments of the education market, evaluate competitors, and integrate the components of a business plan created in written assignments during the semester.

Thursday, 1:00 - 4:00 p.m.
T-581 Advanced Design Studio
David Kahle
Spring course; four credits.
This project-based course introduces students to advanced topics in the design and development of online environments for education, including project management, human-centered and educational design strategies, and programming for interactive learning in both formal and informal educational settings. The Advanced Design Studio focuses on software design for both formal and informal educational settings. The course provides an opportunity for students to build on their earlier coursework in educational technology design and development by working as a member of a project development team. Through supervised collaborative work around a single medium-scale project, students will assume roles in and work through the various stages of a project’s life cycle, from analysis and design to development and implementation. The course focal point, the studio project, will be defined by student teams early in the semester. Guest faculty and local professionals will be invited to present their expertise on topics relevant to the design and development of the studio project.
Prerequisite: An educational technology design course such as T-522 may be useful in building a foundation for T-581.
Thursday, 5:00 - 9:00 p.m. A lab will be held 7:00 – 9:00 p.m.

T-598 Field Experience in Electronic Technology and Education
Members of the TIE Faculty
Fall course; four credits.
Students in the Technology, Innovation, and Education Program may enroll in this supervised internship course to gain practical expertise in the field of technology and education. Students should contact Rilda Kissel, Longfellow 326, for initial information on internship possibilities and then approach a member of the TIE faculty for supervision. A learning contract drawn up by the student, and approved by the field site supervisor and faculty supervisor, is required at the beginning of the internship. There are no formal course sessions, but regular meetings with the faculty supervisor and a reflection paper or other written report are expected. Ten to twelve hours per week are necessary for full course credit. This course may be taken in the fall and/or spring semesters. Students may only count two T-598 internships toward their degree and may only intern at a given site for one semester.
Dates and times to be arranged.

T-600 Thinking and Learning in the 21st Century: Project Zero Perspectives
(formerly titled Perspectives on Learning)
Carrie James, Daniel Wilson
Fall course; four credits.
This course explores diverse perspectives on thinking and learning, drawing on over four decades of work from Project Zero (PZ), a research center at HGSE. Since its inception in 1967 as a center for research on learning in the arts, PZ’s work has extended in new directions while maintaining a focus on thinking, learning, and deep understanding. Today, PZ’s diverse portfolio includes research and pedagogical frameworks related to the following themes: multiple intelligences; teaching for understanding; making learning visible; visible thinking; creating cultures of thinking; thinking in the arts; group learning; cognition in science; interdisciplinary teaching and learning; ethical issues and other dimensions of good work; and the implications of globalization, market forces, and digital life for learning and learners today. The course will touch on all these themes and focus more deeply on a selection that is representative of their scope. The course will connect study of PZ frameworks to a set of core questions such as: What do thinking and learning look like? In what contemporary contexts do thinking and learning thrive? What are related opportunities and challenges? What’s worth learning and understanding today and tomorrow? Guest senior PZ researchers will present on their themes of expertise. Lead faculty will engage students in activities, discussion, and other core learning experiences aimed at connecting each theme back to our core questions about the nature of thinking and learning in the 21st century.
Tuesday, 1:00 - 4:00 p.m.

T-800 Research and Evidence: Framing Scientific Research for Public Understanding
Tina Grotzer
Fall course; four credits.
How can educators and scientists help the public understand and act on research findings? This course is designed to consider issues related to how people understand and consume the products of research. It is intended for a broad audience, both those who are comfortable with science and those who are not. It includes educators in the traditional sense, but also those who focus on media (traditional and viral), curriculum, or computer programs; analyze research for policy purposes; and so on. For those planning to conduct research, it offers important context for deciding how to frame research questions and conclusions.
for greatest impact. Applying principles from cognitive science and psychology, it explores human perceptual patterns, what garners attention, reasoning about evidence, and typical decision-making tendencies. It considers the nature of knowing in the sciences, and how people’s tendencies interact with those ways of knowing to contribute to critical problems for public understanding and use of scientific research in their everyday lives. It asks: How do these patterns affect what people attend to and believe; their willingness to change their behavior; and their perception of science, research, and the media? It considers how we think about risk, consider environmental issues, make educational decisions, and choose effective products. Current and everyday examples will be investigated. The class format includes activities, discussion, and brief lectures. There will be weekly readings and three structured assignments in which students have significant choice of focus. The final project will involve designing a product that translates research for public consumption.

Thursday, 1:00 - 4:00 p.m.