

EDUCATION (EDUC)

Courses

EDUC 1001 (1) Humanities Teaching for Equity: Naming

Critically frames learning to teach for equity and justice. Focuses on naming and examining students' identities and positionalities. Orients students to the School of Education's mission and guiding principles of the Secondary Humanities program. Meets weekly on CU campus.

Requisites: Restricted to teacher licensure students with an EDEN-LICU, EDSS-LICU, or EDSP-LICU plan

Grading Basis: Letter Grade

EDUC 1020 (1) First Year Success at CU

Introduces first-year majors to campus resources and academic success strategies. Students learn about a wide range of topics, including time management, research, and student involvement. This course also serves as a forum for continued conversations about concepts from EDUC 3013: School in Society, as well as the social justice implications for emerging leaders and educators.

Repeatable: Repeatable for up to 2.00 total credit hours.

Requisites: Restricted to Education (EDUC) or Leadership/Community Engagement (LDCE) majors only.

EDUC 1080 (3) Decolonizing Education: Design for New Futures

What does critical pedagogy mean? What does it mean to be a transformative educator? What does emancipatory, critical, culturally sustaining education praxis, actually look like? These are the central questions that guide this course. In this course, students will have the opportunity to explore the intersection of curriculum design, critical pedagogy, and learning theory through conversations with scholars, teaching sample lessons, reflective writing, practice-based pedagogical activities, and examinations of current-events related to critical pedagogy. Formerly offered as a special topics course.

Grading Basis: Letter Grade

EDUC 1500 (1) Success Strategies in Higher Education

Introduces students to learning theories and a range of college success strategies to deepen their engagement with their academic work. Students will learn metacognitive practices to identify the values and aims driving their academic ambitions and craft their most successful path through their undergraduate experience.

Repeatable: Repeatable for up to 2.00 total credit hours.

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Education

EDUC 1580 (3) Energy and Interactions

Engages non-physics majors in hands-on, minds-on activities and labs to investigate the physical world, the nature of science, and how science knowledge is constructed. This introductory course is especially relevant for future elementary and middle school teachers although it will meet the needs of most non-physics and non-science majors. Physics content focuses on interactions and energy.

Equivalent - Duplicate Degree Credit Not Granted: PHYS 1580

Additional Information: Arts Sci Core Curr: Natural Science Non-Sequence
Arts Sci Gen Ed: Distribution-Natural Sciences

Departmental Category: General Education

MAPS Course: Chemistry

MAPS Course: Natural Science

MAPS Course: Physics

EDUC 2001 (2) Humanities Teaching for Equity: Noticing

Critically frames learning to teach for equity and justice. Focuses on noticing classroom and school spaces. Orients students to the School of Education's mission and guiding principles of the Secondary Humanities program. Meets weekly on CU campus. Includes 4 hours of middle school practicum each week.

Requisites: Requires prerequisite of EDUC 1001 (minimum grade C-). Restricted to teacher licensure students with an EDEN-LICU, EDSS-LICU, or EDSP-LICU plan.

Grading Basis: Letter Grade

EDUC 2015 (1) Elementary Mathematics and Science Teaching for Social Justice

Working for social justice is central to teaching mathematics and science with elementary-aged children. This course engages prospective elementary teachers with a multitude of early math and science experiences that children draw upon to understand their worlds. Participants will develop interest-driven, culturally sustaining, and inclusive action plans for teaching math and science for social justice with young learners.

Requisites: Restricted to Elementary Education (EDEL) majors only.

Grading Basis: Letter Grade

EDUC 2020 (2) Step 1: Inquiry Approaches to Teaching STEM

Invites science, mathematics and engineering students to explore teaching as a career by providing first-hand experiences teaching science/math lessons in local elementary classrooms. Introduces theory and practice necessary to design and deliver excellent instruction. Master teachers provide ongoing support and feedback. Meets weekly on CU campus (1.5 hours/week) and involves five visits to an elementary school.

Additional Information: Departmental Category: General Education

EDUC 2025 (1) Step 1: Inquiry Approach to Teaching in Informal Settings

Invites science, mathematics and engineering students to explore teaching and learning in informal K-12 environments. Introduces theory and practice necessary to design and deliver excellent instruction. Meets weekly on CU campus (1.5 hours/week) and requires participants to work a minimum of five hours with K-12 students at STEM-related special events such as science fairs, after school programs, and science camps.

Requisites: Restricted to AMEN, ASTR, BCHM, CHEM, EBIO, GEOL, IPHY, MATH, MCDB, PHYS, IDEN, NRSC, Arts and Sciences Open Option majors, Exploratory Studies or College of Engineering majors, or Education minors only.

Additional Information: Departmental Category: General Education

EDUC 2030 (2) Step 2: Inquiry-Based Lesson Design

Builds on EDUC 2020 and further develops lesson design and inquiry-based teaching practice. Offers opportunity to explore teaching career and learn about middle school culture. Master teacher provides support as students design and deliver lessons in middle school classrooms. Emphasizes assessment of student learning. Meets weekly on CU campus (1.5 hours/week) and involves five visits to a local middle school.

Requisites: Requires prerequisite of EDUC 2020 or EDUC 4610 (all minimum grade C).

Additional Information: Departmental Category: General Education

EDUC 2035 (3) Designing STEM Learning Environments and Experiences

This introductory course to the CU Teach licensure program will facilitate students exploring secondary STEM teaching as a career and provide foundational knowledge for the design of learning environments. Following an introduction to the theory and practice behind research-based and equity-seeking STEM instruction, students will observe and team-teach lessons in a middle school classroom to obtain introductory, firsthand experience in the design of learning environments and experiences.

EDUC 2050 (1) Step Up to Social Justice Teaching

Engages students in theory and practice for justice-centered teaching. This first required course for majors introduces the principles guiding the elementary program and provides opportunities for students to enact those principles in collaboration with children and teachers in public school classrooms. Meets weekly on CU campus (1.25 hours/week). Involves additional visits to local schools.

Requisites: Restricted to School of Education (EDUC) undergraduates only

Additional Information: Departmental Category: General Education

EDUC 2125 (3) History of American Public Education

Provides an overview of the history of American education by exploring major reforms efforts from the common school movement to "Nation at Risk." Examines what intellectuals were thinking about public schools and what ordinary people experienced in them. Assesses how differences in race/ethnicity, class, gender, and power shaped public schools.

Additional Information: Arts Sci Core Curr: United States Context
Arts Sci Gen Ed: Distribution-Arts Humanities
Departmental Category: General Education

EDUC 2130 (3) Teaching and Learning Math: Calculus, Trig and Adv Functions

This course focuses on the design and facilitation of mathematics experiences that embody more active approaches to learning advanced mathematics topics, including advanced algebra, trigonometry, and calculus. The parallel investigation of mathematics content, task design, and issues of teaching and learning occur throughout the course; this intertwining of perspectives is accomplished through the use of various instructional materials, readings, activities, and mathematics curricula. One overarching goal is to engage participants in advanced mathematical reasoning, to reflect on their own knowledge of mathematical relationships, and to examine pedagogical ideas that can foster productive mathematical teaching and learning.

EDUC 2150 (3) Education in Film

Provides opportunities to view and analyze how facets of education are represented (or misrepresented) in film. Considers narratives constructed about education and how those stories fuel popular conceptions of and assumptions about students, teachers, and schools. Examines how issues of race, class, and gender are embedded in how films represent schools, teachers, students, and communities.

Additional Information: Departmental Category: General Education

EDUC 2311 (3) Children's Literature and Literacy Engagement in Elementary Schools

Focuses on teaching children's literature in elementary schools & youth organizations. Participants will understand theoretical and developmental processes associated with literary learning, methods for teaching literature in a diverse society, and the integration of classroom instruction with the Colorado Academic Content Standards that foster such processes.

Additional Information: Departmental Category: Elementary Education

EDUC 2400 (3) Cultural Diversity and Awareness

Enhances students' self-awareness in a variety of educational and cultural settings. Investigates self within a cultural context, inviting students to engage more deeply with their cultural assumptions and lenses, as well as the cultural practices and beliefs of other distinct groups. Explores themes relating to diversity through works of fiction, cultural contexts, contemplative practices, poetry, music and experiential activities.

Additional Information: Departmental Category: General Education

EDUC 2411 (3) Educational Psychology for Elementary Schools

Integrates theories and ideas from elementary school child development, educational psychology and the learning sciences. Explores theories of learning and child development and considers implications for teaching, student engagement and the design of equitable and effective learning environments. Students are required to attend a practicum off-site for this class.

Additional Information: Departmental Category: General Education

EDUC 2425 (3) Foundations of Bilingual/Multicultural Education

Provides the conceptual, linguistic, sociological, historical, political, and legal foundations that have shaped bilingual education policies, program models, and teaching and assessment practices of bilingual and multicultural education in the U.S. Designed for undergraduate elementary teacher education majors, the course presents an overview of the types of bilingual education programs and the principles that anchor equitable and quality bilingual and multicultural education for emergent bilingual students, including those identified as English learners. Can be taken concurrently with EDUC 2615 (but should not be taken after).

EDUC 2490 (3) Educational Psychology for Elementary Schools

This course integrates theories and ideas from human development, educational psychology, and the learning sciences. Together, we will explore theories of learning and human development and consider implications for teaching, student engagement, and the design of equitable and effective learning environments.

Recommended: Prerequisite EDUC 3013 School and Society.

EDUC 2500 (3) Strategies for Social Change

Examines strategies for social change locally and internationally. Critically explores a range of social change case studies including: community organizations, social movements, social entrepreneurship, philanthropy, political and legal advocacy and technology. Students will develop their own proposal for a social change initiative.

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Education

EDUC 2615 (3) Foundations of Language Acquisition for Bilingual Learners

This course provides an overview of the processes associated with bilingual and biliteracy development with a focus on children who are learning and living in two (or more) languages in their homes, communities, and schools. Designed for undergraduate elementary teacher education majors and preservice teachers, the course examines the complexity of bilingualism and biliteracy in school-age children, including the roles of language and culture in schooling.

Recommended: Corequisite EDUC 2425.

EDUC 2625 (3) Teaching English Language Development

Exposes students to strategies used to teach English Language Development. Covers both theoretical and applied aspects of language learning and teaching. Exposes students to techniques, activities, strategies and resources to plan instruction for students learning English Language Development. Emphasizes oral language development, literacy and content-area instruction for teaching K-12 students.

Additional Information: Departmental Category: General Education

EDUC 2800 (1-3) Special Topics

Designed to meet needs of students with topics of interest.

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General Education

EDUC 2910 (1-3) Field Practicum 1

Offers supervised campus and off-campus experiences tied to course work in the INVST program. See also EDUC 2920.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General Education

EDUC 2919 (3) Renewing Democracy in Communities and Schools

Examines curriculum theory, K-12 reform, and the concepts of citizenship, democracy, power, and diversity through classroom discussion and participation in a school-based Public Achievement program. Students will dialogue with diverse groups of people; identify multiple perspectives around controversial issues; and learn to use research and writing to articulate public problems and advocate for their solutions.

Equivalent - Duplicate Degree Credit Not Granted: INVS 2919

Repeatable: Repeatable for up to 6.00 total credit hours.

Additional Information: Arts Sci Core Curr: Human Diversity

Arts Sci Gen Ed: Distribution-Social Sciences

Arts Sci Gen Ed: Diversity-U.S. Perspective

Departmental Category: General Education

EDUC 2920 (1-3) Field Practicum 2

Offers supervised campus and off-campus experiences tied to course work in the INVST program. See also EDUC 2910.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General Education

EDUC 3001 (2) Humanities Teaching for Equity: Negotiating

Critically frames learning to teach for equity and justice. Focuses on how relationships are negotiated in classroom spaces. Orients students to the School of Education's mission and guiding principles of the Secondary Humanities program. Meets weekly on CU campus. Includes 4 hours of high school practicum each week.

Requisites: Requires prerequisite of EDUC 1001 (minimum grade C-).

Restricted to teacher licensure students with an EDEN-LICU, EDSS-LICU, or EDSP-LICU plan.

Grading Basis: Letter Grade

EDUC 3013 (3) School and Society

Introduces students - both future teachers and those simply interested in education - to pressing issues surrounding education within the United States. The course reveals the complex relationship between schools and the larger society of which they are a part. Examines issues of diversity and equity from different disciplinary lenses, including history, philosophy, sociology and anthropology.

Requisites: Restricted to students with 27-180 credits (Sophomores, Juniors or Seniors) only.

Additional Information: Arts Sci Core Curr: Human Diversity

Arts Sci Core Curr: Contemporary Societies

Arts Sci Gen Ed: Distribution-Social Sciences

Arts Sci Gen Ed: Diversity-U.S. Perspective

Departmental Category: General Education

EDUC 3030 (3) Race, Class, and Gender in Young Adult Literature

This course is designed for students who are interested in learning more about how race, class, and gender appear in literature for young people, ages 10-18, and how literary explorations of these intersecting elements of identity might enrich, complicate, and/or challenge how we see ourselves, others, and our world. Together and independently, we will read and share in conversation around several multicultural young adult texts across multiple genres, including novels, short stories, poetry, drama, and nonfiction.

Grading Basis: Letter Grade

EDUC 3190 (3) Introduction to Teaching and Learning

This course engages students in questions about what it means to teach and what it means to learn. Through readings, video, and illustrations of teaching and learning in and outside of schools, the course builds understandings about some key areas of teaching, learning, and schooling that will complement the content from other courses in the program. The course is centered in a framework of educational equity and justice that is threaded through the modules. The course is designed to support students in their post-degree goals across career contexts in which knowledge of teaching learning will enhance their work.

Grading Basis: Letter Grade

EDUC 3320 (3) Literacy in the Elementary Classroom 1

Over the two-course sequence in literacy, students in the elementary major develop a foundational knowledge of core aspects of literacy learning and instruction and apply this knowledge in practica settings, working at individual, small group, and whole-class levels. Literacy 1 focuses primarily on the structure and components of equitable and robust reading instruction in K-5 classrooms, the five pillars of the reading process (phonics, phonemic awareness, fluency, vocabulary, and comprehension), and the analysis and implementation of evidence-based reading instruction practices, with some connections to writing development and assessment and writing instruction.

Requisites: Requires corequisite courses of EDUC 3350 and EDUC 4535 and EDUC 4595. Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 3321 (3) Literacy in the Elementary Classroom 2

Over the course of the two-course sequence in literacy, students in the elementary major develop a foundational knowledge of core aspects of literacy learning and instruction and apply this knowledge in practical settings, working at individual, small group, and whole-class levels. Literacy 2 builds on the goals of the first course in the sequence and provides a central focus on the structure and components of equitable and robust writing instruction in K-5 classrooms. The course addresses the skills and processes of writing, how to support and engage writers, writing assessment, and the analysis and enactment of evidence-based writing instruction practices. In addition, the course includes content area literacy and continues building students' facilities with digital and multimodal literacy in elementary classrooms.

Requisites: Requires prerequisite courses of EDUC 3320 and EDUC 3350 and EDUC 4535 and EDUC 4595 (all minimum grade B-). Requires corequisite courses of EDUC 4205 and EDUC 4435 and EDUC 4455. Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 3350 (3) Dis/Ability in Contemporary Classrooms

Examines major issues in special education focusing on a) developing an inclusive stance to teaching all students; b) understanding laws, responsibilities and RTI/MTSS; c) planning for and delivering differentiated instruction in a universally designed classroom environment; e) the social construction and identification of disabilities; f) understanding potential variations across federal disabilities categories; g) teaching students with gifts and talents and; h) collaborating with families and professionals.

Requisites: Requires corequisite courses of EDUC 3320 and EDUC 4535 and EDUC 4595. Requires prerequisite or corequisite courses of EDUC 2425 and EDUC 2615 (minimum grade D-). Restricted to Elementary Education (ELED-BA) majors only.

EDUC 3570 (3) Learning With Technology In and Out of School

Examines ways digital media are changing the way young people learn, play, make friends, and participate in civic life. Studies widely implemented digital tools intended to support literary, math, and science learning of children ages 4-18. Involves brief internship (5 hours outside class) and design projects that integrate these tools to transform in either a classroom or after-school program.

Additional Information: Departmental Category: General Education

EDUC 3621 (1-3) Art for the Elementary Teacher

Introduces elementary education students to art education. Introduces many visual art techniques, art media and processes used in art education. Includes hands-on studio art experiences in a format that supports subjects such as literature, writing, music and social studies. Emphasizes the role of art education and materials in supporting the artistic development and visual literacy of children. Department enforced prerequisite: completion of 30 hours of course work.

Requisites: Restricted to School of Education (EDUC) undergraduates only

Additional Information: Departmental Category: Elementary Education

EDUC 4001 (3) Framing Equity and Justice in the Humanities Classroom

Critically frames learning to teach for equity and justice within schools as systems. Orients students to the School of Education's mission and guiding principles of the Secondary Humanities program. Provides opportunities for students to enact those principles with mentor teachers in local classrooms. Meets weekly on CU campus and involves a minimum of 50 hours in local schools.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5001

Requisites: Restricted to EDEN-LICU, EDSS-LICU or EDSP-LICU students.

Grading Basis: Letter Grade

EDUC 4010 (3) Race and Equity in Higher Education

This course introduces students to recent research and theory surrounding race, ethnicity, access, inclusion, and equity in higher education. It focuses on the development of knowledge, skills and awareness that is crucial in becoming an engaged scholar and practitioner in the areas of diversity, equity, and inclusion. We discuss the responsibilities, tensions, and opportunities one must have in creating and maintaining a pluralistic and inclusive campus for all. We also discuss ways in which themes of identity and diversity operate far beyond one-on-one relationships but rather extend to systems and structures that comprise a college and/or university environment.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5010

EDUC 4015 (3) International / Comparative Education

Comparatively studies education in other countries, emphasizing its role in developing nations, with an emphasis on successful models in basic literacy, primary education, secondary curriculum and teacher education. Analyzes political, social and economic policies and ideologies for their relevance to the development process, including the role of international organizations: World Bank, UNICEF, UNESCO, Peace corps and Volunteer Agencies.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5015

Additional Information: Departmental Category: General Education

EDUC 4023 (3) Differentiating Instruction in Diverse Secondary Classrooms

Focuses on teaching culturally and linguistically diverse students, special education students, and differentiation in the classroom. Emphasizes evidence-based teaching practices and programmatic interventions that support student learning. Includes practicum.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4351

Requisites: Restricted to EDEN, EDFR, EDGR, EDIT, EDJP, EDLT, EDMA, EDMU, EDSC, EDRU, EDSP, EDSS or MMED majors only.

Additional Information: Departmental Category: Secondary Education

EDUC 4035 (3) Family and Community Engagement

Supports teachers to develop, improve and maintain positive relationships between families, communities, and schools. Discusses theories of family/community engagement with focus on embracing an assets-orientation. Explores the impacts families and communities can have in education, policies that impact family/community engagement in schools, and other potential bridges and barriers to meaningful partnerships. Challenges students to understand and embrace community-driven systemic education reform.

Requisites: Requires prerequisite courses of EDUC 3321 and EDUC 4205 and EDUC 4435 and EDUC 4455 (all minimum grade B-). Requires corequisite courses of EDUC 4215 and EDUC 4331 and EDUC 4710.

Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 4050 (3) Knowing and Learning in Mathematics and Science

Explores current theories of learning in mathematics and science at the secondary level. This course focuses on learners' opportunities to learn mathematics and science in a classroom context from the perspective of different theoretical orientations. Students examine their own assumptions about learning, and critically examine the needs of a diverse student population in the classroom. Includes a weekly two hour field component.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5050

Requisites: Restricted to AMEN, ASTR, BCHM, CHEM, EBIO, GEOL, IPHY, MATH, MCDB, PHYS, IDEN, NRSC, Arts and Sciences Open Option majors, Exploratory Studies or College of Engineering majors, or Education minors only.

Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences
Departmental Category: Secondary Education

EDUC 4060 (3) Classroom Interactions

Students design and implement instructional activities informed by what it means to know and learn mathematics and science, and then evaluate the outcomes of those activities on the basis of classroom artifacts.

Students examine how content and pedagogy combine to make effective teaching. Students are required to work in a classroom 4 hours per week.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5060

Requisites: Restricted to School of Education (EDUC), Mathematics-Secondary Education (EDMA) or Science-Secondary Education (EDSC) majors only.

Additional Information: Departmental Category: Secondary Education

EDUC 4110 (1-3) Cultural Mentoring with Dual Language Learners

Introduces students to cultural mentoring, the role of cultural identity in schooling, and culturally responsive pedagogies through a partnership with a local elementary School. Students will be assigned fifth grade mentees to work with throughout the semester and will work with other mentors to plan group activities for the after-school program. Requires 2 hours/per week outside of meeting times for participant-observation at a local elementary school. Mentors can repeat the mentoring component one time for 1-credit. This course is designed for first generation and/or students from minoritized backgrounds who can serve as role models for Elementary students in a Dual Language Program. Interested students should contact the instructor prior to enrolling. Previously offered as a special topics course.

Repeatable: Repeatable for up to 4.00 total credit hours.

Requisites: Requires prerequisite of EDUC 3013 (minimum grade C-) or Ethnic Studies (ETHN) majors. Restricted to students with 57-180 credits (Juniors or Seniors).

EDUC 4112 (3) Adolescent Development and Learning for Teachers

Examines current theory and research about adolescent learning and development and explore implications for secondary teaching. Topics include human diversity as a resource for learning, adversity and agency, connecting instruction to students' everyday lives, and the role of belonging and relationships in positive youth development. This course is appropriate for masters degree students.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5112

Requisites: Restricted to students with 27-180 credits (Sophomores, Juniors or Seniors) only.

Additional Information: Departmental Category: Secondary Education

EDUC 4125 (3) Secondary World Language Methods

Presents and discusses issues in secondary school curriculum, instruction, and classroom management as they play out in world language classroom. Examines, analyzes, and evaluates a variety of teaching strategies, their effectiveness for students, and teacher dispositions to facilitate learning. Includes in-school experiences.

Additional Information: Departmental Category: Secondary Education

EDUC 4135 (3) Story and Memoir

Explores narrative theory and the epistemological/stylistic commitments of stories as the basis for writing memoir, as well as for studying the written and spoken memoirs of others. We use the word memoir to mean a story of "how one remembers one's own life." Introduces and discusses narrative theory and selected memoirs. Students engage in reflection on their own narrative-making processes and evaluate their practical and analytic understanding of daily narrative practice.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5135

Additional Information: Departmental Category: Secondary Education

EDUC 4150 (3) Introduction to Qualitative Research Methods

Introduces students to qualitative research in education. Examines the foundations, design, methods and analysis of qualitative research methods. Readings include texts about the foundations and purposes of qualitative inquiry, and methodological readings about the application of research techniques. Students will complete a variety of small, hands-on projects that introduce major dimensions of qualitative research including observation, interviewing, and document analysis.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5150

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Education

EDUC 4161 (1-3) Children's Literature

Addresses reading and evaluation of books, children's, interests, authors and illustrators, folk literature, multicultural literature, modern fanciful tales, and trends.

Additional Information: Departmental Category: General Education

EDUC 4205 (3) Elementary School Mathematics Theory and Methods

The course focuses on learning theories, different instructional practices, models, and tools that can be utilized to elicit, assess, and build on elementary students' mathematical reasoning. The course subscribes to a view of mathematics that (1) all students can learn mathematics, (2) that powerful mathematics learning is an active process that engages students in deep mathematical inquiry, and (3) that equitable and culturally responsive teaching of mathematics requires strong mathematics knowledge for teaching.

Requisites: Requires prerequisite courses of EDUC 3320 and EDUC 3350 and EDUC 4535 and EDUC 4595 (all minimum grade B-). Requires corequisite courses of EDUC 3321 and EDUC 4435 and EDUC 4455. Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 4215 (3) Elementary Science Theory and Methods

Provides pre-service elementary teachers opportunities to explore contemporary theories of learning, curriculum development, pedagogical strategies, and assessment. Blends scientific content, pedagogy, and practical applications.

Requisites: Requires prerequisite courses of EDUC 3321 and EDUC 4205 and EDUC 4435 and EDUC 4455 (all minimum grade B-). Requires corequisite courses of EDUC 4035 and EDUC 4331 and EDUC 4710. Restricted to Elementary Education (ELED-BA) majors only.

EDUC 4220 (3) Gender Issues in Education

Provides a strong foundation in the various issues of gender and sexual diversity in education. Stimulates explorations into the ways the construct of "gender" affects and is affected by the educational system and process. Presents theory and research about contemporary educational issues related to sexism, homophobia, and transphobia. Encourages development of well-considered views about the various issues, research, and theories.

Requisites: Restricted to students with 57-180 credits (Juniors or Seniors).

Recommended: Prerequisite EDUC 3013.

EDUC 4222 (3) Language Study for Educators

Focuses on the nature of linguistic development and performance. Examines works that reflect a range of scholarly approaches to language study, explores language use both in and out of school, takes up the relationships between language practices and power and considers implications for classroom teaching.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5222

Additional Information: Departmental Category: General Education

EDUC 4232 (3) Language and Literacy across the Curriculum

Explores the relationship between language and learning in math and science classrooms with the goal of developing teaching practices that engage students in using language as a tool for understanding and constructing meaning across the curriculum. Explores how language/literacy take on different forms and functions in different social contexts and academic disciplines.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5235

Requisites: Restricted to undergraduate Science-Secondary Education (EDSC) or Mathematics-Secondary Education (EDMA) majors only.

Additional Information: Departmental Category: Secondary Education

EDUC 4240 (3) African American Education in the United States

Explores development of schooling for African Americans in the U.S.. Emphasizes historical and contemporary struggles of this group in their quest to access meaningful educational opportunities. Examines how social, economic, political, and judicial action defined and organized policy and practice for this group. Degree credit not granted for EDUC 4240 and 6240.

Additional Information: Departmental Category: General Education

EDUC 4295 (3) Narrative and Story in the Humanities

Explores a wide variety of texts that might be used in secondary English and Social Studies classrooms. Examines philosophies and instructional approaches to the teaching of reading and literature. Considers the influence of story and storytelling in the construction of personal and societal meaning.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5295

Requisites: Requires corequisite of EDUC 3001 or EDUC 4001. Restricted to teacher licensure students in English (EDEN-LICU).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Secondary Education

EDUC 4301 (3) Queer(ing) Topics in Education

Bring critical and queer theoretical perspectives to bear on an inquiry into what's counted as "normal" in social, historical, and political contexts of education in the United States. We'll explore queerness, queer theory, and queer pedagogy, in an effort to examine schooling as a heteronormative institution that has tended toward (re)producing heterosexism, homophobia, and violence against queer bodies and identities.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5301

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Education

EDUC 4310 (3) Social and Emotional Learning in Schools

Explore the ways SEL benefits students through investigating its purposes and goals, the competencies it seeks to promote, the characteristics of effective programs, and the range of program formats. We frame these topics through examining ongoing dilemmas in the field. We also conduct in-depth reviews of several programs and the research that supports them.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5310

EDUC 4315 (3) Perspectives on Science

Explores contemporary ideas and issues in the history, philosophy and sociology of science education and science, science as a social and cultural activity and how contemporary issues in science relate to and impact educational practice.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5315

Additional Information: Departmental Category: General Education

EDUC 4316 (3) Nature of Social Studies and Social Studies Education

Prepares teacher education candidates for teaching social studies in a social context. Participants will understand theoretical and developmental processes associated with social studies learning, methods for teaching social studies in a diverse society, and the integration of classroom instruction with the Colorado Academic Content Standards that foster such processes.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5316

Requisites: Restricted to Social Studies Secondary Education (EDSS-LICU or EDSS-LICG) students only.

EDUC 4317 (3) Perspectives on Mathematics

Explores the historical development of mathematics as a human construct, and the relationship between the discipline and the contemporary school mathematics curriculum. Focuses on the sociology of mathematics education and how cultural traditions and societal needs influence the school mathematics curriculum and educational practice.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5317

EDUC 4320 (3) Reading Instruction for Elementary Schools

Participants will engage theories and processes of literacy learning, reading development, and equity-oriented teaching. Students will learn, develop, and enact instructional strategies and lessons to support all students' successful participation in a range of print and multimodal literacy practices embedded in reading instruction in elementary classrooms.

Requisites: Restricted to Elementary Education (EDEL) majors only.

Additional Information: Departmental Category: Elementary Education

EDUC 4321 (3) Writing Instruction for Elementary Schools

Participants will engage theories and processes of literacy learning, writing development, and equity-oriented teaching. Students will learn, develop, and enact instructional strategies and lessons to support all students' successful participation in a range of multimodal literacy practices embedded in writing instruction in elementary classrooms.

Requisites: Requires prerequisite courses of EDUC 3350, EDUC 4320, EDUC 4535 and EDUC 4615 (minimum grade C-). Requires corequisite courses of EDUC 4205, EDUC 4435, EDUC 4455 and EDUC 4595.

Restricted to Elementary Education (ELED) majors only.

Additional Information: Departmental Category: Elementary Education

EDUC 4325 (3) Queering Literacy in Secondary Classrooms

Engages theories and practices of literacy teaching and learning that challenge multiple forms of oppression. Using the tools of queer pedagogy, students will learn, develop, and enact strategies for planning and implementing literacy instruction that moves beyond inclusion of differences in the English/language arts and social studies curriculum.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5325

Requisites: Restricted to students with an English-Secondary Education Licensure plan (EDEN-LICU) or Social Studies-Secondary Education Licensure plan (EDSS-LICU).

Grading Basis: Letter Grade

EDUC 4330 (3) Secondary Social Studies Methods I

Explores effective social studies teaching techniques used to prepare secondary students for success in college, career, and civic life. An emphasis is placed on interpreting sources, understanding multiple perspectives, and employing critical thinking with diverse students.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5330

Requisites: Requires a prerequisite of EDUC 3001 or EDUC 4001 (both minimum grade C-). Restricted to teacher licensure students in Social Studies (EDSS-LICU).

Grading Basis: Letter Grade

EDUC 4331 (3) Elementary Social Studies Methods

Prepares teacher education candidates for teaching social studies in a social justice and equity context. Participants will understand theoretical and developmental processes associated with social studies learning, culturally responsive teaching pedagogy in social studies, methods for teaching social studies in a diverse society, and the integration of classroom instruction with the Colorado Academic Content Standards.

Requisites: Requires prerequisite courses of EDUC 3321 and EDUC 4205 and EDUC 4435 and EDUC 4455 (all minimum grade B-). Requires corequisite courses of EDUC 4035 and EDUC 4215 and EDUC 4710. Restricted to Elementary Education (ELED-BA) majors only.

Additional Information: Departmental Category: Elementary Education

EDUC 4340 (3) Advanced Issues of Assessment, Teaching, and Learning in Reading, Mathematics, and Science

In this course, students engage with theories and practices of assessment and instruction in the key content areas of reading, mathematics, and science. This course is taught in two half-semester modules; one focused on reading and one on mathematics/science and occurs in the fourth and final year of the elementary major. The course addresses issues of assessment, teaching, and learning that build from and extend knowledge and practice from the assessment course and the methods courses in the three focal content areas. Modules will examine the purposes and practices of assessment in reading, mathematics and science education in elementary education. Particular attention will be given to theoretical foundations in assessment, applications of theory in classroom practice, and the design and use of assessment techniques and tools to support teaching for student understanding. While some attention will be given to large-scale assessment, this will be necessarily limited and addressed only as it pertains to the in

Requisites: Requires prerequisite courses of EDUC 4035 and EDUC 4215 and EDUC 4331 and EDUC 4710 (all minimum grade B-). Requires corequisite course of EDUC 4720. Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 4341 (3) Elementary Reading Assessment and Instruction

Builds on knowledge and teaching practices introduced in EDUC 4320. Addresses five critical components of reading. Refines understanding of research-based practices for diagnostic assessments and intervention, and teaching strategies for elementary age learners. Prepares candidates to deliver a comprehensive reading curriculum in the elementary grades.

Requisites: Requires corequisite courses of EDUC 4331 and EDUC 5215. Restricted to Elementary Education (EDEL) majors only.

Additional Information: Departmental Category: Elementary Education

EDUC 4345 (3) Secondary English Methods I

Explores the underlying principles and philosophies of several approaches to the teaching of English in the areas of language, writing, and speaking and the practical application of these methods in the secondary classroom. Provides support in constructing activities, assignments, assessments, and units that meet the differentiated needs of students given their diverse identities, lives, interests, and needs.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5345

Requisites: Requires a prerequisite of EDUC 3001 or EDUC 4001 (both minimum grade C-). Restricted to teacher licensure students in English (EDEN-LICU).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Secondary Education

EDUC 4351 (3) Language and Equity in Inclusive Learning Environments

Focuses on responsive instructional approaches for elementary school students, including culturally and linguistically diverse students requiring special education services. Addresses relevant educational laws and policies aimed at protecting students' rights to a quality education. Includes practicum experiences in elementary school settings.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4023

Requisites: Requires corequisite course of EDUC 5205. Restricted to Music (EDMU) Education majors or Elementary (EDEL) majors only.

Additional Information: Departmental Category: Elementary Education

EDUC 4355 (3) Secondary Social Studies Methods II

Explores effective techniques associated with reading, processing, and assessing social studies subject area content with an emphasis on developing critical thinking skills and meeting the needs of diverse students.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5355

Requisites: Requires prerequisite course of EDUC 4330 (minimum grade C-). Restricted to Social Studies - Secondary Education (EDSS-LICU) students only.

EDUC 4365 (3) Secondary English Methods II

Explores the underlying principles and philosophies of several approaches to the teaching of English in the areas of reading, thinking, and viewing and the practical application of these methods in the secondary classroom. Provides support in constructing activities, assignments, assessments, and units that meet the differentiated needs of students given their diverse identities, lives, interests, and needs.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5365

Requisites: Requires prerequisite course of EDUC 4345 (minimum grade C-). Restricted to English - Secondary Education (EDEN-LICU) students only.

EDUC 4375 (3-4) Problem-Based Math Instruction

Focuses on curriculum, materials, methods and assessment, and related aspects of instruction. Introduces best practices in teaching mathematics in middle and high schools. Students are required to work in a classroom 4 hours per week. Examines the Colorado Academic Content Standards.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5375

Requisites: Restricted to EDCI, EDSC, or EDMA majors only.

Recommended: Corequisite EDUC 4023.

EDUC 4385 (4) Phenomenon-Based Science Instruction

Focuses on curriculum, materials, methods, assessment, and related aspects of instruction. Introduces best practices in teaching science in middle and high schools. Students are required to work in a classroom 4 hours per week. Examines the Colorado Academic Content Standards.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5385

Requisites: Requires prerequisite of EDUC 4060.

Recommended: Corequisite EDUC 4023.

EDUC 4390 (3) Teaching for Equity and Justice

Supports candidates as they continue to develop the skills and stance to teach for equity and justice in public school settings. Explores how educators for equity and justice sustain their commitments through ongoing learning and reflection, care for their students and themselves, and collaboration and advocacy. Supports candidates in making the transition from the university into the profession in a way that allows them to remain true to their vision of who they are and want to be as educators.

Requisites: Requires prerequisite course of EDUC 4330 or EDUC 4345 (all minimum grade C-). Restricted to English - Secondary Education (EDEN-LICU) and Social Studies - Secondary Education (EDSS-LICU) students only.

Grading Basis: Letter Grade

EDUC 4425 (3) Introduction to Bilingual/Multicultural Education

Provides an introduction for education minors and others with an interest in education policy and practice to bilingual and multicultural education programs for emergent bilinguals. Includes an overview of the history and legislation related to the education of emergent bilingual students, identification and placement, as well as the various models, theoretical and philosophical underpinnings, and pedagogical practices that constitute sound educational practices for emergent bilingual students.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5425

Additional Information: Departmental Category: General Education

EDUC 4435 (3) Culturally Sustaining Pedagogies for Bilingual Learners

Explores multicultural education, critical pedagogy, and culturally sustaining pedagogies, including their underlying theories, curriculum design, and curriculum examples. Students will analyze curriculum with a focus on its representation of different socio-cultural groups, identities, points of view, relationship to different communities, and ideology. Students will also begin planning, teaching, and evaluating instruction anchored in critical, culturally sustaining pedagogies.

Requisites: Requires prereq courses of EDUC 3320 and EDUC 3350 and EDUC 4535 and EDUC 4595 (all min B-). Requires coreq courses of EDUC 3321 and EDUC 4205 and EDUC 4455. Requires prereq or coreq courses of EDUC 2425 and EDUC 2615. RSTR to Elem Ed (ELED-BA) mjrs.

EDUC 4455 (3) Methods of Biliteracy Instruction

Critique and analyze the linguistic, social, political and cultural factors that influence the acquisition of literacy for emerging bilingual (EB) learners. We will examine and apply evidence-based practices that support the development of reading, writing, speaking and listening in all of the students; languages regardless of the program model schools enact to serve them.

Requisites: Requires prerequisite courses of EDUC 3320 and EDUC 3350 and EDUC 4535 and EDUC 4595 (all minimum grade B-). Requires corequisite courses of EDUC 3321 and EDUC 4205 and EDUC 4435. Restricted to Elementary Education (ELED-BA) majors only.

EDUC 4460 (3) Teaching and Learning Physics

Learn how people understand key concepts in physics. Through examination of physics content, pedagogy and problems, through teaching, and through research in physics education, students will explore the meaning and means of teaching physics. Students will gain a deeper understanding of how education research is done and how people learn. Useful for all students, especially for those interested in physics, teaching, and education research.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5460 and PHYS 4460 and PHYS 5460

Requisites: Requires prerequisite courses of PHYS 3210 and PHYS 3310 (all minimum grade C-).

Additional Information: Departmental Category: Graduate Education

EDUC 4490 (3) Blurring Disciplinary Lines in the Humanities

Explores theories, methods, and materials for building interdisciplinary connections within and across secondary English and Social Studies classrooms. Provides opportunities for collaborative work in building lessons and unit plans that challenge disciplinary boundaries and advocate for complex problem solving.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5490

Requisites: Requires prerequisite of EDUC 3001 or EDUC 4001 (minimum grade C-). Restricted to teacher licensure students in English (EDEN-LICU) or Social Studies (EDSS-LICU).

Grading Basis: Letter Grade

EDUC 4500 (3) Community-Based Research for Social Change

Complete a research project that draws on theories of social change and is developed in partnership with a community or civic agency. Become skilled at doing original research to address complex social problems.

Requisites: Requires prerequisite course of EDUC 2500 (minimum grade B-).

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Education

EDUC 4513 (2) Education and Practice

Meets during student teaching assignment. Includes topics of concern to teachers, such as classroom organization and management, lesson planning, assessment, preparation of edTPA, etc.

Requisites: Requires corequisite course of EDUC 4691 or 4712 or 4722. Restricted to EDEL, EDEN, EDFR, EDGR, EDJP, EDLT, EDMA, EDRU, EDSC, EDSP or EDSS majors only.

Additional Information: Departmental Category: General Teacher Education

EDUC 4535 (3) Assessment for Bilingual Learners

Introduce students to the theory, methods, practice, and problems in the testing and assessment of bilingual students at the classroom and large-scale level. Topics include the specification of English Learners as a student population and the assessment of their language proficiency and academic achievement. The course additionally addresses reliability, validity, and fairness in the testing of linguistically diverse populations.

Requisites: Requires corequisite courses of EDUC 3320 and EDUC 3350 and EDUC 4595. Restricted to Elementary Education (ELED-BA) majors only.

EDUC 4595 (3) Practicum for Bilingual/Multicultural and ELD Education
University supervised, school based field experiences teaching culturally and linguistically diverse students. Accompanies university coursework required for the Colorado endorsement in Culturally and Linguistically Diverse Education.

Requisites: Requires corequisite courses of EDUC 3320 and EDUC 3350 and EDUC 4535. Restricted to Elementary Education (ELED-BA) majors only.

EDUC 4610 (2) Becoming a Learning Assistant

Introduces undergraduate Learning Assistants (LAs) to education research, active learning, and strategies that support: (1) eliciting student ideas and helping all group members become active and engaged in the class; (2) listening and questioning; (3) building relationships; and (4) integrating learning theories with effective practices. Also "LA Pedagogy Course." Department enforced prerequisite: Learning Assistant Program admission. First-semester LAs requirement.

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Education

EDUC 4611 (1) Advanced Topics in Learning Assistant Pedagogy

Builds on education research and inclusive pedagogical principles discussed in EDUC 4610, and introduces new topics for experienced Learning Assistants to learn and apply to their LA-student interactions. This course is also referred to as Returning LA Professional Development.

Repeatable: Repeatable for up to 6.00 total credit hours.

Requisites: Requires prerequisite course of EDUC 4610 (minimum grade C-).

EDUC 4615 (3) Language Acquisition for Bilingual Learners

Provides an introduction for education minors and others with an interest in education and human development topics to the variables that interact in the process of bilingual development in emergent bilinguals, from birth to adolescence. These variables include the learner's background, motivation, linguistic, cognitive, emotional, social, cultural, and political factors. The course will examine these factors and generate understandings about how they work together to foster or inhibit successful development of bilingualism in community, home, and school contexts.

EDUC 4620 (2) LA Mentoring I: Becoming a Mentor

This field-based course is the second in a three-sequence course intended for Learning Assistants. This course provides opportunities for advanced Learning Assistants (LAs) to practice mentoring strategies as they mentor first-time LAs. LA mentors will observe and consult with their LA mentees each week and observe entire contexts in which LAs are used. In the seminar component of the course, LA mentors will discuss their readings about mentoring, skillful teaching, and group facilitation and they will reflect on their work with their LA mentees.

Requisites: Requires prerequisite course of EDUC 4610 (minimum grade C-).

Grading Basis: Letter Grade

EDUC 4621 (1) Learning Assistant Mentoring in Practice: Building Inclusive Learning Communities

Builds on education research and inclusive mentoring and pedagogical principles and practices discussed in EDUC 4610 and EDUC 4620, and creates opportunities for LA Mentors to plan for, receive feedback about, and reflect upon, their individual and group mentoring experiences.

Repeatable: Repeatable for up to 4.00 total credit hours.

Requisites: Requires prerequisite course of EDUC 4610 and prerequisite or corequisite course of EDUC 4620 (all minimum grade C-).

EDUC 4625 (3) Methods of Teaching English Language Development

Prepares students to teach English as a new language in K-6 U.S. public schools. Grounded in theoretical understandings of language acquisition and development, students develop resources and strategies to plan instruction for emergent bilingual children. Oral language development, literacy, and content-area language instruction are emphasized, with a focus on supporting children's linguistic, cognitive, academic and social development.

Grading Basis: Letter Grade

EDUC 4630 (2) LA Mentoring II: Improving the Program

This is a continuation of EDUC 4620. LA mentors will continue to mentor first-time LAs, but they will also design and test projects intended to address issues with the LA program that they have identified in the field. LA mentors will complete instructional innovation projects through cycles of design, testing, feedback, and revision. In this course, LA mentors enact projects leading to the improvement of the LA program through improved student and faculty experiences.

Requisites: Requires prerequisite course of EDUC 4620 (minimum grade D-).

Grading Basis: Letter Grade

EDUC 4691 (10) Student Teaching: Elementary School 1

Kindergarten through sixth grades. Department enforced prerequisite: completion of all education and content-specific arts and sciences requirements, and passing required licensure exam.

Requisites: Requires corequisite course of EDUC 4513. Restricted to Elementary Education (EDEL-LICU or LICG) majors only.

Additional Information: Departmental Category: General Teacher Education

EDUC 4706 (3) Assessment in Mathematics and Science Education

Examines purposes and practices of assessment in mathematics and science education. Particular attention is given to application of theoretical foundations and contemporary research in the design and use of assessment techniques and tools to support teaching for student understanding. Addresses the role of effective formative assessment in teaching and learning.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5706

EDUC 4710 (3) Elementary Student Teaching for Cultural and Linguistic Diversity 1

This course is the first semester of a year-long, elementary classroom-based internship. Building on prior and concurrent Education courses, candidates are expected to design and deliver culturally and linguistically responsive instruction in collaboration with an experienced elementary teacher, as well as independently. Assignments and the required student teaching seminar support candidates to reflect critically on their practice and learning. Recommendation for a Colorado initial teaching license requires excellent performance in both semesters of student teaching.

Requisites: Requires prerequisite courses of EDUC 3321 and EDUC 4205 and EDUC 4435 and EDUC 4455 (all minimum grade B-). Requires corequisite courses of EDUC 4035 and EDUC 4215 and EDUC 4331.

Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 4712 (10) Student Teaching: Secondary School

Student teacher apprentices in a middle/junior or senior high school. Must be admitted to a secondary teacher education program in English, Japanese, Latin, math, Russian, science or social studies. Department enforced prerequisites: completed all education and content-specific arts and sciences courses and passed required licensure exam.

Requisites: Requires corequisite course of EDUC 4513. Restricted to EDEN, EDJP, EDLT, EDMA, EDRL, EDSC or EDSS (LICU or LICG) majors only.

Additional Information: Departmental Category: General Teacher Education

EDUC 4715 (3) Elementary Student Teaching Seminar Part 1

This seminar supports sense making during elementary student teaching through deliberative dialogues, culture circles, and teacher inquiry. During the final year of the Elementary Education program, teacher candidates complete advanced coursework and engage in extended student teaching field experiences in local schools. These activities raise important problems of practice that can fuel teacher learning. This seminar provides structure, support, and guidance from skillful facilitators and peers to support sensemaking during the elementary student teaching experience.

Requisites: Requires co-requisite course of EDUC 4710. Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 4716 (3) Basic Statistical Methods

Introduces descriptive statistics including graphic presentation of data, measures of central tendency and variability, correlation and prediction, and basic inferential statistics, including the t-test.

Additional Information: Departmental Category: General Education

EDUC 4720 (9) Elementary Student Teaching for Cultural and Linguistic Diversity 2

This course is the second semester of a year-long, elementary classroom-based internship. Building on prior and concurrent Education courses, candidates are expected to design and deliver culturally and linguistically responsive instruction in collaboration with an experienced elementary teacher, as well as independently. Assignments and the required student teaching seminar support candidates to reflect critically on their practice and learning. Recommendation for a Colorado initial teaching license requires excellent performance in both semesters of student teaching.

Requisites: Requires prerequisite courses of EDUC 4035 and EDUC 4215 and EDUC 4331 and EDUC 4710 (all minimum grade B-). Requires corequisite course of EDUC 4340. Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 4722 (5) Student Teaching: Secondary School 2

Student teacher apprentices in a middle/junior high or senior high school. Department enforced prerequisites: completed all education and content-specific arts and sciences courses and passed required licensure exam.

Requisites: Requires corequisite course of EDUC 4513. Restricted to EDJR, EDGR or EDSP (LICU or LICG) majors only.

Additional Information: Departmental Category: General Teacher Education

EDUC 4725 (3) Elementary Student Teaching Seminar Part 2

This seminar supports sense making during elementary student teaching through deliberative dialogues, culture circles, and teacher inquiry. During the final year of the Elementary Education program, teacher candidates complete advanced coursework and engage in extended student teaching field experiences in local schools. These activities raise important problems of practice that can fuel teacher learning. This seminar provides structure, support, and guidance from skillful facilitators and peers to support sensemaking during the elementary student teaching experience.

Requisites: Requires co-requisite course of EDUC 4720. Restricted to Elementary Education (ELED-BA) majors only.

Grading Basis: Letter Grade

EDUC 4732 (4-12) Student Teaching K-12

Required experience for music students seeking education at both elementary and secondary levels. Department enforced prerequisites: completed all education and content-specific music courses and passed required licensure exam.

Requisites: Requires corequisite course of MUSC 4193. Restricted to EDMU (LICU or LICG) majors only.

Additional Information: Departmental Category: General Teacher Education

EDUC 4742 (9) Student Teaching: Secondary for Engineers

Student teacher apprentices in a middle/junior or senior high school. Must be admitted to a secondary teacher education program in English, Japanese, Latin, math, Russian, science or social studies. Department enforced prerequisites: completed all education and content-specific arts and sciences courses and passed required licensure exam.

Requisites: Requires a prerequisite course of EDUC 4513 or EDUC 4050 (minimum grade C-). Restricted to EDMA or EDSC majors only.

Additional Information: Departmental Category: Secondary Education

EDUC 4800 (1-9) Special Topics

Designed to meet needs of students with topics of pertinent interest.

Repeatable: Repeatable for up to 18.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General Education

EDUC 4801 (3) Race and its Implications for Science Education

Science and science-related professionals have played an important role in supporting and challenging conceptions of ¿race¿. In this class, we explore historical constructions of race and their implications for teaching and learning in science education. Our goal is to develop a deep understanding of how ¿race¿ manifests in educational contexts. We conclude our class by constructing our own social dream about what science education ought to be. Formerly offered as a special topics course.

EDUC 4810 (1-9) Special Topics

Repeatable: Repeatable for up to 18.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General Education

EDUC 4811 (3) Teaching and Learning Biology

Provides an introduction to recent research into student learning on the conceptual foundations of modern biology, together with pedagogical methods associated with effective instruction and its evaluation. Students will be involved in active research into conceptual and practical issues involved in biology education, methods to discover student preconceptions, and the design, testing and evaluation of various instructional interventions.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 6811 and MCDB 4811 and MCDB 5811 and EBIO 4811

Recommended: Prerequisite At least two semesters of Biology.

Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

EDUC 4815 (3) Teaching K-12 Mathematics: Number Sense

Provides teachers opportunity to explore fundamental mathematical theories and pedagogical perspectives pertaining to the teaching and learning of number and operation. Engages students in explorations of mathematical content underlying number and operations, while highlighting relevant problem solving, reasoning and proof, and mathematical connections. Explores implications of teachers' mathematical learning on their classroom teaching. Develops practices supporting learner's number sense development.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5815

EDUC 4821 (3) Teaching K-12 Mathematics: Algebraic Thinking

Uses reform-based mathematics curricula to engage participants in algebraic thinking, to reflect on their own knowledge of algebraic concepts, and to examine pedagogical ideas that can foster K-12 students' algebraic thinking and learning. Algebraic topics include patterning, variable, functions, multiple representations, equality, and solving linear and systems of equations.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5821

EDUC 4822 (3) Teaching and Learning Chemistry

Explores issues related to how people learn and teach chemistry. Reviews high school and early college chemistry concepts both from the content and pedagogical perspectives. Delves into the chemistry education research, education, psychology, and cognitive science literature. Provides an opportunity to observe and/or teach K-12 or college chemistry classes.

Recommended: Prerequisite of one semester of college-level chemistry.

Additional Information: Departmental Category: General Education

EDUC 4831 (3) Advanced Peer Education

Second semester of an academic year's training for students interested in peer counseling. Expand upon what you learned in ARSC 2274. Focus on presentations, leadership, and group facilitation. Basic group leadership, facilitation theory, and technique taught. Co-create and co-lead your own small groups/presentations for other CU students. Offered only spring semesters.

Requisites: Requires prerequisite course of ARSC 2274 (minimum grade D-).

Additional Information: Departmental Category: General Education

EDUC 4833 (3) Teaching and Learning Earth Systems

Learn and develop pedagogically effective strategies for teaching and understanding Earth Science concepts. Particular emphasis is placed on understanding the importance of geoscience habits of mind (i.e. spatial/temporal reasoning, multiple working hypotheses, geographic context). Focuses upon inquiry and evaluation of evidence, the importance of background knowledge and misconceptions, and developing effective discourse within and outside the classroom.

Requisites: Requires prerequisite course of ATOC 1060 or ENVS 1000 or GEOL 1010 or GEOL 1020 or GEOL 1060 (minimum grade C-).

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Teacher Education

EDUC 4835 (3) Teaching K-12 Mathematics: Geometry & Measurement

Provides an opportunity to explore how to foster geometric thinking while examining fundamental mathematical theory underlying the content area of geometry and measurement. Emphasizes investigative approach involving problem solving, reasoning, connections, and communication as well as learning mathematics content in a flexible and conceptual way. Challenges participants to apply their understanding to teaching practices that foster geometric thinking in K-12 learners. Also see EDUC 5835.

EDUC 4840 (1-4) Independent Study

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General Education

EDUC 4844 (3) Teaching and Learning Computational Thinking

This course is designed for current and future STEM educators interested in understanding Computational Thinking and how it can be enacted to support student learning. Computational Thinking is the process by which people make sense of problems where computation, or computational tools, could be leveraged to enact the solution. For example, when students are tasked with solving a word problem they engage in computational thinking by identifying important elements in the written problem and then leveraging mathematical or scientific methods that would lead to a solution. During this course, students will engage with research-based theories, conceptualizations, and practices for engaging with Computational Thinking in STEM learning environments and experiences. Following an introduction to Computational Thinking, students will be supported in making sense of the ideas and practices through published research, existing tools, classroom activities, and reflection on experiences of problem solving and overcoming

EDUC 4850 (3) Teaching K-12 Mathematics: Probability & Statistics

Focuses on teaching probability, data analysis, and statistics in K-12 classrooms. Explores curriculum and assessment strategies in the areas of probability and statistics. Examines research on students' thinking on stochastic tasks and how this research informs teaching practice. Emphasizes deepening of one's conceptual understanding of probability and statistics and their importance in the current information age.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 5850

EDUC 4901 (3) Student Teaching

Provides opportunities for practice around classroom community building, instruction, assessment, etc. in partnership with a mentor teacher and public school students. Experiences will vary depending upon the context, grade level, and school/course placement.

Requisites: Requires prerequisite of EDUC 5001 (minimum grade C-). Requires corequisite of EDUC 5330 or EDUC 5345. Restricted to MA+ teacher licensure students in English (EDEN-LICG), Mathematics (EDMA-LICG), Science (EDSC-LICG), or Social Studies (EDSS-LICG).

Grading Basis: Letter Grade

EDUC 4902 (4) Student Teaching II

Provides opportunities for practice around classroom community building, instruction, assessment, etc. in partnership with a mentor teacher and public school students. Although experiences will vary depending upon the context, grade level, and school/course placement, in this practicum students will build upon their work in Student Teaching I and take greater responsibility for teaching.

Requisites: Requires prerequisite of EDUC 4901 (minimum grade C-) and corequisite of EDUC 5355 or 5365. Restricted to students with an English-Secondary Education Licensure plan (EDEN-LICU) or Social Studies-Secondary Education Licensure plan (EDSS-LICU).

Grading Basis: Letter Grade

EDUC 4910 (3) Peer Counseling Practicum

Controlled enrollment. Credit given for peer counseling activities. Students are selected to participate in this class and act as peer counselors or TAs for the peer counseling training. Repeatable up to 9 total credit hours.

Repeatable: Repeatable for up to 9.00 total credit hours.

Additional Information: Departmental Category: General Education

EDUC 4912 (1) Practicum in Teacher Education

Provides in-school practicum experience

Repeatable: Repeatable for up to 3.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General Teacher Education

EDUC 5001 (3) Framing Equity and Justice in the Humanities Classroom

Critically frames learning to teach for equity and justice within schools as systems. Orients students to the School of Education's mission and guiding principles of the Secondary Humanities program. Provides opportunities for students to enact those principles with mentor teachers in local classrooms. Meets weekly on CU campus and involves a minimum of 50 hours in local schools.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4001

Requisites: Restricted to Masters-level teacher licensure students with a English-Secondary Education (EDEN-LICG) or Social Studies-Secondary Educ (EDSS-LICG) plan.

Grading Basis: Letter Grade

EDUC 5002 (3) Framing Equity and Justice in the STEM Classroom

Critically frames learning to teach for equity and justice in Science, Technology, Engineering, and Mathematics [STEM] Classrooms. Orients students to the School of Education's mission and guiding principles of the CU Teach program. Provides opportunities for students to enact those principles with mentor teachers in local classrooms. Meets weekly on CU campus and involves a minimum of 40 hours in local schools.

Requisites: Restricted to Mathematics-Secondary Education (EDMA-LICG) or Science-Secondary Educ (EDSC-LICG) students only.

Grading Basis: Letter Grade

EDUC 5005 (3) Advanced Social Foundations of Education

Critically examines the intellectual and political forces that shape the aims, policies, and practices of K-12 education in the United States.

Requisites: Restricted to Educ-Curriculum Instruction (EDCI) graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5010 (3) Race and Equity in Higher Education

This course introduces students to recent research and theory surrounding race, ethnicity, access, inclusion, and equity in higher education. It focuses on the development of knowledge, skills and awareness that is crucial in becoming an engaged scholar and practitioner in the areas of diversity, equity, and inclusion. We discuss the responsibilities, tensions, and opportunities one must have in creating and maintaining a pluralistic and inclusive campus for all. We also discuss ways in which themes of identity and diversity operate far beyond one-on-one relationships but rather extend to systems and structures that comprise a college and/or university environment.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5011 (1) College Student Career Development

Explores the diverse aspects of career development for college students. Examines the different models of career services for students in different schools, colleges and majors.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5012 (1) Higher Education Finance

Covers the major, basic elements of budgeting and finance in higher education. It is designed to address the budget process in colleges and universities, as well as the impact of budget activities on other areas of planning and operations within an institution. Enhances students' knowledge of both internal and external financial environments facing higher education.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5014 (1) Ethical Dilemmas in Higher Education

Examines ethical issues involved in higher education and student affairs administration. Uses real and fictional ethical cases to bring to light various moral and ethical tensions relevant for higher education and student affairs professionals.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5015 (3) International / Comparative Education

Comparatively studies education in other countries, emphasizing its role in developing nations, with an emphasis on successful models in basic literacy, primary education, secondary curriculum and teacher education. Analyzes political, social and economic policies and ideologies for their relevance to the development process, including the role of international organizations: World Bank, UNICEF, UNESCO, Peace Corps and Volunteer Agencies.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4015

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5020 (1) College Academic Advising

Explores the diverse aspects of academic advising for college students. Examines the different models of advising for students in different schools, colleges and majors.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5021 (1) College Athletic Affairs

Examines the relationship between student-athletes and the institution and explores how intercollegiate athletics fits into the academic enterprise of higher education. Key questions include: 1) what purpose does athletics serve and 2) for whose benefit? With these questions in mind, we examine the range of issues at the intersection of athletic administration, student development theory, and educational leadership and policy.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5022 (1) LGBTQ+ Topics in Higher Education

Explores the diverse aspects of college and university life for students, staff, and faculty who identify as LGBTQ+. Examines the different higher education supports and challenges for LGBTQ+ student populations.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5023 (1) College Admissions and Enrollment

Explores the diverse aspects of college and university student recruitment, outreach, admissions, and enrollment. Examines the different models of admissions processes and systems, with attention to relevant politics and professional practices.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5026 (1) Technology in Higher Education

Examines impact of technology on higher education and student affairs. Explores impact of technology on students and their development, and teaching and learning. Although technical aspects of technology are discussed in some depth, this is not designed as a 'technical' course; the content revolves around implications of technology as both a driving and a supportive element within higher education

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5027 (1) Institutional Advancement and Development in Higher Education

Examines the roles of institutional advancement, development, and fundraising in higher education and student affairs. Explores the impact of advancement on students, staff, and faculty, as well as on teaching and learning, research, campus life, and the larger community. The content will revolve around implications of development work as both a driving and a supportive element within higher education.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5028 (1) International Education in Higher Education and Student Affairs

To provide an introduction to the field of international education.

Students pursuing graduate studies in higher education administration will benefit from an overview of global student mobility trends and an exploration of career pathways within the field. In-class discussions, out-of-class readings, and guest speakers will guide student learning.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

EDUC 5030 (1) Accessibility and Students with Disabilities in Higher Education

Provides students with important knowledge about issues of accessibility and development for students with disabilities in higher education.

Examines strategies to offer support and guidance to students with disabilities in order to foster a safe and engaging learning and living environment.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5031 (1) Institutional Research & Analytics in Higher Education

Examines the roles and uses of institutional research and data analytics in higher education and student affairs. Provides students with a foundational understanding of the field of institutional research and data analytics in higher education. Explores the activities in which institutional researchers engage, the tools they need to be successful in their jobs, the topics they study and issues they investigate.

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5032 (1) College Student Leadership Development

Surveys the study and practice of leadership and provides students with a variety of experiences to wrestle with large leadership questions. What is leadership? Who can be a leader? How is leadership an important aspect of understanding self and others?

Requisites: Restricted to Master's in Higher Education (MAHE) graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5033 (1) Special Topics in Higher Education

This 1-credit "module" course examines special topics in higher education practice. The course is designed to feature emerging questions of higher education policy and practice. This course satisfies requirements for the MA in Higher Education program, but is also open to other students.

Repeatable: Repeatable for up to 4.00 total credit hours.

EDUC 5035 (3) Family and Community Engagement

Focuses on models and strategies for improving parent and community involvement in the schools. Discusses administrative concerns, such as parent advisory councils, and instructional concerns, such as helping children with school assignments.

Additional Information: Departmental Category: Graduate Education

EDUC 5050 (3) Knowing and Learning in Mathematics and Science

The course is aimed at providing graduate students the opportunity to engage deeply with theories of mathematics and science learning for the purposes of designing engaging and affirming learning environments. The course is centered around reading deeply and critically in the literature on learning theory, coupled with a youth and community-based research project.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4050

Requisites: Restricted to graduate students only.

EDUC 5060 (3) Classroom Interactions

Students design and implement instructional activities informed by what it means to know and learn mathematics and science, and then evaluate the outcomes of those activities on the basis of classroom artifacts.

Students examine how content and pedagogy combine to make effective teaching. Students are required to work in a classroom 4 hours per week.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4060

Requisites: Restricted to Educ-Curriculum Instruction (EDCI) graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5065 (3) Curriculum Theories

Examines four central curricular traditions: progressive; conservative; radical; and spiritual. Highlights the strengths and weaknesses of various writers within each tradition with attention paid to the conceptual features and the practical implications of each educational view.

Encourages students to examine their own educational assumptions.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5070 (3) Spirituality and Religion in Education

Examines features of religion, spirituality, and a liberal arts education, so as to further understand the constitutional, historical and cultural constraints on, and acceptable approaches to the study of religion and spirituality in American education. Specifically explores aspects of a contemplative orientation and the degree to which such an orientation should/can be pursued in K-12 public and higher education.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5075 (3) Sociology of Education

In-depth analysis of the theories and concepts in sociology and education. Evolution of curriculum, organization, and enrollment characteristics of American schools. Schooling, race, class, culture, gender, stratification, and educational reform in light of paradigmatic change in theories and concepts of sociology.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5085 (3) History of American Education

Highlights social and intellectual history perspectives of American educational history, major reform movements from the 19th century to Dewey, and assessment of how differences of race, class, ethnicity, religion, power, and gender affected American education.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5105 (3) Teaching for Understanding and Equity

Addresses perspectives and evidence-based teaching practices that promote equity and access to conceptual understanding. Introduces the knowledge base on effective and socially just teaching practices, and the theories and research that support these practices. Explores the impact of theory and research on classroom instruction.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5112 (3) Educational Psychology and Adolescent Development

Analyzes fundamental concepts from psychology and the learning sciences to understand how educators can support youth development in and out of school. Includes service learning requirement. This course is not appropriate for in-service teachers.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4112

Requisites: Restricted to graduate students only.

EDUC 5115 (3) Issues in School Change and Reform

Examines recent developments in teaching, and trends in the philosophy and practice of education. Focuses special attention on a variety of issues central to school reform.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5135 (3) Story and Memoir

Explores narrative theory and the epistemological/stylistic commitments of stories as the basis for writing memoir, as well as for studying the written and spoken memoirs of others. We use the word memoir to mean a story of "how one remembers one's own life." Introduces and discusses narrative theory and selected memoirs. Students engage in reflection on their own narrative-making processes and evaluate their practical and analytic understanding of daily narrative practice.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4135

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5145 (3) Gender, Literacy, and the K-12 Classroom

Explores and critiques various conceptions of gender within popular and scholarly publications that have influenced how gender and sexual diversity is approached in classrooms. Builds a theoretical stance toward gender and sexual diversity that supports equity, engagement and achievement for all children and youth. Discusses teaching strategies that thoughtfully take into account gender identities and equity.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5150 (3) Introduction to Qualitative Research Methods

Introduces students to qualitative research in education. Examines the foundations, design, methods and analysis of qualitative research methods. Readings include texts about the foundations and purposes of qualitative inquiry, and methodological readings about the application of research techniques. Students will complete a variety of small, hands-on projects that introduce major dimensions of qualitative research including observation, interviewing, and document analysis.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4150

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: General Education

EDUC 5165 (3) Children's Literature

Involves reading and evaluation of picture books, and emphasizes children's interests, authors and illustrators, multicultural literature, the components of narrative, and the features of illustrations. Examines connections between children's literature and children's development as writers.

Additional Information: Departmental Category: Graduate Education

EDUC 5177 (3) Curriculum and Policy in Mathematics and Science Education

This course explores the changing curriculum in school mathematics and science. It will examine the history and evolution of K-20 math and science curricula from the late 1890s to current times. It will examine motivations and political forces that have helped shape and change math and science curricula.

Requisites: Restricted to graduate students only.

EDUC 5178 (3) Theories of Learning in Math and Science Education

This course focuses on research on the learning of mathematics and science in the K-12 schooling environment. It serves to introduce students to seminal learning theories that have guided and shaped mathematics & science education over the past thirty years (e.g., constructivist, cognitive, situative/sociocultural and critical perspectives). Core ideas within each of these theoretical perspectives will be explored such as knowledge construction and conceptual change, argumentation and reasoning, classroom discourse processes, participation and identity, and access and power. Implications of these different theoretical perspectives for classroom teaching and learning will also be examined. For example, questions such as the following are considered: What is the purpose of a theory of learning (e.g., for teaching, for education systems)? What constitutes learning within each perspective? What are the implications of a particular theoretical perspective for organizing learning environments? What are the implications for classroom teaching and learning?

Requisites: Restricted to graduate students only.

EDUC 5179 (3) Seminar on Teaching and Teacher Education in Math and Science Education

This course examines how scholarship on teaching and teacher learning has been evolving in mathematics and science educational research since the 1980s and 1990s. Students will explore theories of teacher learning and how they relate to designs for teacher preparation and professional development. We will also study common designs and design principles for conducting research to study teaching and teacher learning.

Recommended: Prerequisites EDUC 5060 and EDUC 6318.

Grading Basis: Letter Grade

EDUC 5205 (3) Elementary Mathematics Theory and Methods

Provides pre-service teachers opportunities to explore contemporary theories of learning, curriculum development, and pedagogical strategies pertaining to teaching elementary-level mathematics. Blends exploration in mathematical content with development of sophisticated mathematical models for teaching.

Requisites: Requires corequisite course of EDUC 4351. Restricted to Elementary Education (EDEL) majors only.

Additional Information: Departmental Category: Elementary Education

EDUC 5215 (3) Elementary Science Theory and Methods

Provides pre-service elementary teachers opportunities to explore contemporary theories of learning, curriculum development, pedagogical strategies, and assessment. Blends scientific content, pedagogy, and practical applications.

Requisites: Requires corequisite courses of EDUC 4331 and 4341.

Restricted to Elementary Education (EDEL) majors only.

Additional Information: Departmental Category: Elementary Education

EDUC 5220 (3) Curating and Evaluating Reading Materials for K-12 Classrooms

In this course, MA students will explore how educators can curate, evaluate, and use different literacy materials for reading and other classroom instruction. Of particular focus will be Children's and Young Adult Literature, decodable books, trade books, and non-traditional texts (e.g., web resources) spanning fiction and nonfiction genres. Attention will be given to texts' written and illustrative quality, cultural relevance and authenticity, and the impacts of these on readers' development and interest.

Requisites: Restricted to graduate students only.

EDUC 5222 (3) Language Study for Educators

Focuses on the nature of linguistic development and performance. Examines works that reflect a range of scholarly approaches to language study, explores language use both in and out of school, takes up the relationships between language practices and power and considers implications for classroom teaching.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4222

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5235 (3) Language and Literacy Across the Curriculum

Explores the relationship between language and learning in math and science classrooms with the goal of developing teaching practices that engage students in using language as a tool for understanding and constructing meaning across the curriculum. Explores how language/literacy take on different forms and functions in different social contexts and academic disciplines.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4232

Requisites: Restricted to EDCL, EECDD, EFPP, EPSY or REME graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5245 (3) Foundations of Reading Instruction K-12

In this course, MA students build and expand their understanding of the five pillars of reading instruction: phonemic awareness, phonics, fluency, vocabulary, and comprehension. They will gain in-depth and up-to-date knowledge about the Science of Reading and the Science of Teaching Reading, as well as the language comprehension and word recognition strands that are woven into skilled reading.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5255 (3) Digital & Disciplinary Literacies

In this course, MA students will analyze current technology integration practices in literacy instruction, and their impact on the building, expanding, and transformation of disciplinary literacies; the situated and specific literacy practices necessary to engage in a particular discipline or content area. We will explore the intersections between digital literacies and new media, knowledge building, and project-based inquiry perspectives when children and youth read texts in the content areas of literature, science, and social studies.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5265 (3) Processes & Skills in Writing

In this course, MA students examine processes that writers use from early ages to maturity by investigating current research related to writing curriculum, instruction, and policy. Includes opportunities for students to engage in inquiry related to writing curriculum and instruction in K-12 classrooms. This course will also examine the ways in which the Science of Reading and Writing can be incorporated into writing pedagogy models.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5275 (3) Diagnostic Reading Assessment & Intervention

In this course, students develop the concept of reading assessment and evaluation for diagnostic purposes, in order to identify supports for students experiencing reading difficulties and to design reading intervention within an MTSS model. Students explore how factors such as psychological, cognitive, and sociocultural perspectives, educational policies, community and school practices, and curricular and teacher expectations influence assessment (data that are collected) and evaluation (interpretive decisions about assessment data).

Requisites: Requires a prerequisite course of EDUC 5245 (minimum grade C-). Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5285 (3) Literacy Coaching & Leadership

The objective of the course is to extend, synthesize, and apply learning gained throughout the program, and to engage participants with advanced topics in literacy, particularly those related to reading interventions and instructional leadership. In addition, many opportunities are provided for demonstrating and evaluating quality small-group and whole-class literacy lessons.

Requisites: Requires a prerequisite course of EDUC 5275 (minimum grade C-). Restricted to graduate students.

Additional Information: Departmental Category: Graduate Education

EDUC 5295 (3) Narrative and Story in the Humanities

Explores a wide variety of texts that might be used in secondary English and Social Studies classrooms. Examines philosophies and instructional approaches to the teaching of reading and literature. Considers the influence of story and storytelling in the construction of personal and societal meaning.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4295

Requisites: Requires prerequisite of EDUC 5001 (minimum grade C-). Restricted to teacher licensure students in English (EDEN-LICG).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5301 (3) Queer(ing) Topics in Education

Bring critical and queer theoretical perspectives to bear on an inquiry into what's counted as "normal" in social, historical, and political contexts of education in the United States. We'll explore queerness, queer theory, and queer pedagogy, in an effort to examine schooling as a heteronormative institution that has tended toward (re)producing heterosexism, homophobia, and violence against queer bodies and identities.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4301

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5310 (3) Social and Emotional Learning in Schools

Explore the ways SEL benefits students through investigating its purposes and goals, the competencies it seeks to promote, the characteristics of effective programs, and the range of program formats. We frame these topics through examining ongoing dilemmas in the field. We also conduct in-depth reviews of several programs and the research that supports them.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4310

Requisites: Restricted to graduate students only.

EDUC 5315 (3) Perspectives on Science

Explores contemporary ideas and issues in the history, philosophy and sociology of science education and science, science as a social and cultural activity and how contemporary issues in science relate to and impact educational practice.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4315

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5316 (3) Nature of Social Studies and Social Studies Education

Prepares teacher education candidates for teaching social studies in a social context. Participants will understand theoretical and developmental processes associated with social studies learning, methods for teaching social studies in a diverse society, and the integration of classroom instruction with the Colorado Academic Content Standards that foster such processes.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4316

Requisites: Restricted to Social Studies Secondary Education (EDSS-LICU or EDSS-LICG) students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5317 (3) Perspectives on Mathematics

Explores the historical development of mathematics as a human construct, and the relationship between the discipline and the contemporary school mathematics curriculum. Focuses on the sociology of mathematics education and how cultural traditions and societal needs influence the school mathematics curriculum and educational practice.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4317

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5325 (3) Queering Literacy in Secondary Classrooms

Engages theories and practices of literacy teaching and learning that challenge multiple forms of oppression. Using the tools of queer pedagogy, students will learn, develop, and enact strategies for planning and implementing literacy instruction that moves beyond inclusion of differences in the English/language arts and social studies curriculum.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4325

Requisites: Restricted to Master's teacher licensure students in English (EDEN-LICG).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5330 (3) Secondary Social Studies Methods I

Explores effective social studies teaching techniques used to prepare secondary students for success in college, career, and civic life. An emphasis is placed on interpreting sources, understanding multiple perspectives, and employing critical thinking with diverse students.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4330

Requisites: Requires prerequisite of EDUC 5001 (minimum grade C-). Requires corequisite of EDUC 4901. Restricted to teacher licensure students in Social Studies (EDSS-LICG).

Grading Basis: Letter Grade

EDUC 5345 (3) Secondary English Methods I

Explores the underlying principles and philosophies of several approaches to the teaching of English in the areas of language, writing, and speaking and the practical application of these methods in the secondary classroom. Provides support in constructing activities, assignments, assessments, and units that meet the differentiated needs of students given their diverse identities, lives, interests, and needs.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4345

Requisites: Requires a prerequisite of EDUC 5001 (minimum grade C-).

Requires corequisite of EDUC 4901. Restricted to teacher licensure students in English (EDEN-LICG).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5355 (3) Secondary Social Studies Methods II

Explores effective techniques associated with reading, processing, and assessing social studies subject area content with an emphasis on developing critical thinking skills and meeting the needs of diverse students.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4355

Requisites: Requires prerequisite course of EDUC 4330 or EDUC 5330 (minimum grade C-). Restricted to teacher licensure students in Social Studies (EDSS-LICG).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5365 (3) Secondary English Methods II

Explores the underlying principles and philosophies of several approaches to the teaching of English in the areas of reading, thinking, and viewing and the practical application of these methods in the secondary classroom. Provides support in constructing activities, assignments, assessments, and units that meet the differentiated needs of students given their diverse identities, lives, interests, and needs.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4365

Requisites: Requires prerequisite course of EDUC 4345 or EDUC 5345 (minimum grade C-). Restricted to teacher licensure students in English (EDEN-LICG).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5375 (3-4) Problem-Based Math Instruction

Focuses on curriculum, materials, methods and assessment, and related aspects of instruction. Introduces best practices in teaching mathematics in middle and high schools. Students are required to work in a classroom 4 hours per week. Examines the Colorado Academic Content Standards.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4375

Requisites: Restricted to EDCl, EDSC, or EDMA majors only.

Recommended: Corequisite EDUC 4023.

Additional Information: Departmental Category: Graduate Education

EDUC 5385 (4) Phenomenon-Based Science Instruction

Focuses on curriculum, materials, methods, assessment, and related aspects of instruction. Introduces best practices in teaching science in middle and high schools. Students are required to work in a classroom 4 hours per week. Examines the Colorado Academic Content Standards.

Requisites: Restricted to EDCl, EDSC, or EDMA majors only.

Recommended: Corequisite EDUC 4023.

Additional Information: Departmental Category: Graduate Education

EDUC 5390 (3) Seminar: Teaching for Equity and Justice

Supports candidates as they continue to develop the skills and stance to teach for equity and justice in public school settings. Explores how educators for equity and justice sustain their commitments through ongoing learning and reflection, care for their students and themselves, and collaboration and advocacy. Supports candidates in making the transition from the university into the profession in a way that allows them to remain true to their vision of who they are and want to be as educators.

Requisites: Requires prerequisite of EDUC 5330 or EDUC 5345 (both minimum grade C-). Restricted to teacher licensure students in English (EDEN-LICG) or Social Studies (EDSS-LICG).

Grading Basis: Letter Grade

EDUC 5425 (3) Introduction to Bilingual/Multicultural Education

Provides an introduction for currently practicing K-12 teachers and non-specialists to bilingual and multicultural education programs for emergent bilingual students. Includes an overview of the history and legislation related to the education of emergent bilingual students, identification and placement, as well as the various models, theoretical and philosophical underpinnings, and pedagogical practices that constitute sound educational practices for emergent bilingual students.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4425

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5435 (3) Materials and Methods in Bilingual/ Multicultural Education

Provides an in-depth study of the curriculum options available for bilingual and ELD programs. Presents, reviews, and critiques specific methods and strategies for teaching language to minority students. Gives the opportunity to develop and present teaching units in Spanish or in ELD methodology, as appropriate.

Requisites: Requires a prerequisite course of EDUC 5425 (minimum grade C-).

Additional Information: Departmental Category: Graduate Education

EDUC 5445 (3) Curriculum for Multicultural Education

Analyzes curriculum programs and examines principles that inform innovation for education of diverse students at all school levels. Includes topics of ethnic, racial, socio-economic, linguistic, and gender diversity.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5455 (3) Literacy for Linguistically Different Learners

Presents current and emerging philosophies and methods on teaching reading to culturally diverse second-language learners. Includes review of materials, strategies for teaching reading and writing skills, and important considerations for transference from L1 to L2 reading.

Requisites: Requires a prerequisite course of EDUC 5425 (minimum grade C-).

Additional Information: Departmental Category: Graduate Education

EDUC 5460 (3) Teaching and Learning Physics

Learn how people understand key concepts in physics. Through examination of physics content, pedagogy and problems, through teaching, and through research in physics education, students will explore the meaning and means of teaching physics. Students will gain a deeper understanding of how education research is done and how people learn. Useful for all students, especially for those interested in physics, teaching, and education research.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4460 and PHYS 4460 and PHYS 5460

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5465 (3) Introduction to ELD/Bilingual and Special Education

Provides students with the fundamental information of ELD, bilingual and special education, including theories, assumptions, philosophies, and paradigms of bilingual and special education. Discusses successful teaching techniques and instructional approaches, including individualization, least restrictive environment, transition, and career education.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5485 (3) Differentiation in the Classroom

Focuses on teaching culturally and linguistically diverse students, special education students, and differentiation in the classroom. Emphasizes evidence-based teaching practices, programmatic interventions that support student learning and using research to inform practice. Includes practicum. Department enforced prerequisite: restricted to MA+ students.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5490 (3) Blurring Disciplinary Lines in the Humanities

Explores theories, methods, and materials for building interdisciplinary connections within and across secondary English and Social Studies classrooms. Provides opportunities for collaborative work in building lessons and unit plans that challenge disciplinary boundaries and advocate for complex problem solving.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4490

Requisites: Requires prerequisite of EDUC 5345 or EDUC 5330 (minimum grade C-). Restricted to teacher licensure students in English (EDEN-LICG) or Social Studies (EDSS-LICG).

Grading Basis: Letter Grade

EDUC 5505 (3) Education of Students with Learning and Behavior Disorders

Discusses unique learning needs of students with learning and behavior disorders. Emphasizes development of a systems model for diagnosis, programming, and remediation. Stresses data-based individualization of instruction, with emphasis on intervention in inclusive learning environments and developing a culturally responsive system.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5515 (3) Curriculum and Assessment for Special Learners

Emphasizes assessment of special education students from pre-referral through staffing and placement, including response to intervention, research-based assessment practices, analytic teaching and assessment, curriculum-based assessment and measurement. Selection, administration, and interpretation of formal and informal assessment devices are studied, with particular emphasis on cultural relevance and equity in assessment for special learners with mild to severe needs.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5525 (3) Research Issues in Special Education

Provides practical experience in the review, critique, conceptualization, and writing of research studies in special education. Also offers experience in design of evaluation systems for classroom practice.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5535 (3) Assessment in Bilingual Communities

Promotes critical uses of assessment instruments and information.

Provides methods for educators to incorporate assessment as a meaningful activity in the classroom intended to support learning among bilingual students. Examines effectiveness, validity, and fairness in the testing of linguistically diverse populations. Provides first-hand experiences developing, selecting, reviewing, and adapting test materials as critical to making informed teaching decisions.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5545 (3) Strategies for Teaching Students with Special Needs

Provides teachers with specific evidence-based methods and techniques for teaching students with a wide variety of high and low disabilities including learning and language disabilities, hearing and visual impairments, physical disabilities, and health impairments. Emphasizes different teaching methods, instructional materials, and learning strategies that have proven effective working students with cognitive learning needs.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5555 (3-4) Practicum in Bilingual/Special Education

Offers supervised field experience in elementary and secondary special education class settings. Each credit hour requires 50 contact hours.

Requisites: Requires prerequisite courses of EDUC 5465 and EDUC 5505 and EDUC 5515 or EDUC 5545 (all minimum grade C-). Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5575 (1-4) Workshop in Curriculum and Instruction

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 5580 (3) Physics and Everyday Thinking

Engages non-physics majors in hands-on, minds-on activities and labs to investigate the physical world, the nature of science, and how science knowledge is constructed. This introductory course is especially relevant for future elementary and middle school teachers although it will meet the needs of most non-physics and non-science majors. Physics content focuses on interactions and energy.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5595 (1-4) Practicum for Educators of Linguistically Diverse Communities

University supervised, school-based field experience teaching linguistically different students, as well as assistance in the completion of EECED portfolio.

Requisites: Requires prerequisite courses of EDUC 5425 and EDUC 5435 and EDUC 5535 (all minimum grade C-). Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5605 (3) Research Issues in Bilingual Education

Offers practical experience in the review, critique, conceptualization, and writing of research studies in bilingual/ELD education. Provides experience in the design of classroom evaluation systems.

Requisites: Requires a prerequisite course of EDUC 5245 (minimum grade C-). Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5610 (1-3) Math and Science Education

Introduces learning theory and teaching practices for mathematics and science learning assistants. Presents theoretical issues such as conceptual development, questioning techniques, cooperative learning, nature of math/science, and argumentation in mathematics and science.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5615 (3) Language Acquisition for Bilingual Learners

Presents a broad survey of second-language acquisition research. Stresses theoretical concerns and research findings and practical applications to teaching second languages. Gives special emphasis to second-language acquisition.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5625 (3) Methods of Teaching English Language Development

Exposes students to strategies used to teach English Language Development. Covers both theoretical and applied aspects of language learning and teaching. Exposes students to techniques, activities, strategies and resources to plan instruction for students learning English Language Development. Emphasizes oral language development, literacy and content-area instruction for teaching K-12 students.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite EDUC 5615.

Additional Information: Departmental Category: Graduate Education

EDUC 5635 (3) Education and Sociolinguistics

Explores the discipline of sociolinguistics, the study of language variation and use, and its application within education settings. Not designed as an advanced sociology or linguistics course. Areas of study include language variation, speech communities, the ethnography of communication, speech and social identities, and sociolinguistic research related to teaching and learning.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5706 (3) Assessment in Mathematics and Science Education

Examines purposes and practices of assessment in mathematics and science education. Particular attention is given to application of theoretical foundations and contemporary research in the design and use of assessment techniques and tools to support teaching for student understanding. Addresses the role of effective formative assessment in teaching and learning.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4706

Additional Information: Departmental Category: Graduate Education

EDUC 5716 (3) Basic Statistical Methods

Introduces descriptive statistics including graphic presentation of data, measures of central tendency and variability, correlation and prediction, and basic inferential statistics, including the t-test.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5726 (3) Introduction to Disciplined Inquiry

Considers various research approaches and methodologies included in education including experimental and quasi-experimental methods; anthropological and case study methods; evaluative research and field studies; correlational; and sociological, historical, and philosophical research. Topics include library research, research criticism, research design, and proposal writing.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5800 (1-9) Master's Special Topics

Designed to meet needs of students with topics of pertinent interest. 00 total credit hours. Allows multiple enrollment in term.

Repeatable: Repeatable for up to 18.00 total credit hours. Allows multiple enrollment in term.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5815 (3) Teaching K-12 Mathematics: Number Sense

Provides teachers opportunity to explore fundamental mathematical theories and pedagogical perspectives pertaining to the teaching and learning of number and operation. Engages students in explorations of mathematical content underlying number and operations, while highlighting relevant problem solving, reasoning and proof, and mathematical connections. Explores implications of teachers' mathematical learning on their classroom teaching. Develops practices supporting learner's number sense development. Formerly EDUC 5810.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4815

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 5821 (3) Teaching K-12 Mathematics: Algebraic Thinking

Uses reform-based mathematics curricula to engage participants in algebraic thinking, to reflect on their own knowledge of algebraic concepts, and to examine pedagogical ideas that can foster K-12 students' algebraic thinking and learning. Algebraic topics include patterning, variable, functions, multiple representations, equality, and solving linear and systems of equations.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4821

Additional Information: Departmental Category: Graduate Education

EDUC 5822 (3) Teaching and Learning Chemistry

Explores issues related to how people learn and teach chemistry. Reviews high school and early college chemistry concepts both from the content and pedagogical perspectives. Delves into the chemistry education research, education, psychology and cognitive science literature. Provides an opportunity to observe and/or teach K-12 or college chemistry classes.

Requisites: Requires prerequisite course of CHEM 1021 or CHEM 1113 or CHEM 1400 (minimum grade C-).

Additional Information: Departmental Category: Graduate Education

EDUC 5833 (3) Teaching and Learning Earth Systems

Learn and develop pedagogically effective strategies for teaching and understanding Earth Science concepts. Particular emphasis is placed on understanding the importance of geoscience habits of mind (i.e. spatial/temporal reasoning, multiple working hypotheses, geographic context). The course focuses upon inquiry and evaluation of evidence, the importance of background knowledge and misconceptions and developing effective discourse within and outside the classroom.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 5835 (3) Teaching K-12 Mathematics: Geometry & Measurement

Provides an opportunity to explore how to foster geometric thinking while examining fundamental mathematical theory underlying the content area of geometry and measurement. Emphasizes investigative approach involving problem solving, reasoning, connections, and communication as well as learning mathematics content in a flexible and conceptual way. Challenges participants to apply their understanding to teaching practices that foster geometric thinking in K-12 learners. Formerly EDUC 5830.

Additional Information: Departmental Category: Graduate Education

EDUC 5844 (3) Teaching and Learning Computational Thinking

This course is designed for current and future STEM educators interested in understanding Computational Thinking and how it can be enacted to support student learning. Computational Thinking is the process by which people make sense of problems where computation, or computational tools, could be leveraged to enact the solution. For example, when students are tasked with solving a word problem they engage in computational thinking by identifying important elements in the written problem and then leveraging mathematical or scientific methods that would lead to a solution. During this course, students will engage with research-based theories, conceptualizations, and practices for engaging with Computational Thinking in STEM learning environments and experiences. Following an introduction to Computational Thinking, students will be supported in making sense of the ideas and practices through published research, existing tools, classroom activities, and reflection on experiences of problem solving and overcoming

EDUC 5850 (3) Teaching K-12 Mathematics: Probability & Statistics

Focuses on teaching probability, data analysis, and statistics in K-12 classrooms. Explores curriculum and assessment strategies in the areas of probability and statistics. Examines research on students' thinking on stochastic tasks and how this research informs teaching practice. Emphasizes deepening of one's conceptual understanding of probability and statistics and their importance in the current information age.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4850

Additional Information: Departmental Category: Graduate Education

EDUC 6110 (3) Student Affairs in Higher Education

Provides students with a thorough introduction to the field of student affairs administration in higher education. Explores diverse facets of college student affairs administration and its role within US higher education. The course will help students develop a broad foundation for subsequent Higher Education study and practice. Focuses on philosophies, complexities, and futures of the student affairs profession.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 6210 (3) Education Policy and the Law

Approaches education policy issues through the rich history of litigation and current legal challenges facing American K-12 schooling. Builds an understanding of the legal and policy development of the American schooling system, particularly in the 20th century. Laws and legal cases will be used as jumping-off points for broader discussions.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6211 (3) Education Law and Litigation Workshop

The students in this workshop course will learn through a project-oriented, constructive conversation between legal experts and education policy experts. With elements of community-engaged learning, as well as clinical and street law, the course creates a forum for an iterative process whereby education students, attorneys (adjunct professors) and law students will work together on legal projects of their own choosing. The attorneys and law students will inform the education researchers about how claims for relief or legislation (or a legal argument used in another context) might be shaped, while the researchers would inform the lawyers and law students about whether and how the research supports a potential claim or approach, and about the sorts of remedial orders or interventions that might be beneficial.

Requisites: Restricted to graduate students only.

EDUC 6220 (3) Gender Issues in Education

Provides a strong foundation in the various issues of gender and sexual diversity in education. Stimulates explorations into the ways the construct of "gender" affects and is affected by the educational system and process. Presents theory and research about contemporary educational issues related to sexism and homophobia. Encourages development of well-considered views about the various issues, research, and theories.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6230 (3) Ethics in Education

Investigates controversies in education from a self-consciously ethical perspective, drawing as appropriate from moral and political theory as well as law. Focuses on public education's role in fostering democratic citizenship and providing equal educational opportunity. Critically evaluates various education reform policies and curriculum policies. Applies method commonly used in medical ethics to make decisions regarding concrete ethically problematic cases.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6240 (3) African American Education in the United States

Explores development of schooling for African Americans in the U.S.. Emphasizes historical and contemporary struggles of this group in their quest to access meaningful educational opportunities. Examines how social, economic, political, and judicial action defined and organized policy and practice for this group. Degree credit not granted for EDUC 4240 and 6240.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: General Education

EDUC 6245 (3) Latinx Education Across the Americas

Examines Latinx education across the Americas in comparative perspective, exploring critical issues, themes, and cross-border movements that link Latinx education in the United States and Latin American education. Considers the socio-historical, cultural, and political contexts that shape the education of Latinx communities, with special attention to issues of race, cultural and national identity, and representation as these are negotiated in schools.

Requisites: Restricted to graduate students only.

EDUC 6250 (3) Higher Education in the United States

Examines major issues in higher education focusing on the sociopolitical contexts in which US universities operate as gatekeepers to opportunities. Topics include the purposes and history of higher education in the United States, college teaching and learning, finance and governance, issues of access and equity related to race, gender, sexual orientation, gender identity, immigration status and class, and student life.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

EDUC 6260 (3) Transnational Migration, Education, and Citizenship

Examines the education of transnational migrant youth and families in comparative perspective, with a focus on citizenship formation. Compares state-led responses to diversity through education and integration policies with the transnational practices of distinct migrant and diaspora communities in both the United States and Europe. Considers the educational experiences of distinct types of migrants, including undocumented immigrant students and their families and university students studying abroad, and implications for citizenship.

Requisites: Restricted to graduate students only.

EDUC 6318 (3) Psychological Foundations of Education

Introduces students to theoretical and empirical contributions of educational and developmental psychology and the learning sciences emphasizing applications to educational practices. Topics include learning, development, cognitive processes, social and cultural context, motivation, assessment and individual differences.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6325 (3) Anthropology of Education

Applies anthropological perspectives to research in educational settings. Focuses on theories of culture, cultural transmission and acquisition, and cultural reproduction and production for understanding schooling and its outcomes.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6328 (3) Advanced Child Growth and Educational Development

Introduces students to recent theoretical and research advances in the study of children and adolescent's cognitive, social and emotional development, with an emphasis on implications for learning in and out of school.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6368 (3) Adolescent Psychology and Development for Teachers

Examines current theory and research on adolescent development, learning, motivation, and academic achievement. Emphasizes how theory and research can inform instructional decisions in the secondary classroom.

Requisites: Restricted to English-Secondary Education (EDEN), Social Studies-Secondary Educ (EDSS), Mathematics-Secondary Educ (EDMA) or Science-Secondary Educ (EDSC) graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6405 (3) College Student Development and Counseling Theories

Covers theories of student development in higher education as they apply to the growth of students and the influence of the college environment on growth and development. Examines selected approaches to counseling theory and practice. Theoretical formulations basic to human development and the counseling process are presented including historical and philosophical background. This course explores themes of human development, self-evolution, meaning making, separation and connection, and moral meaning making, and how college students are other adults construct themselves and the meaning they make of their experience.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 6504 (3) Issues and Methods in Cognitive Science

Interdisciplinary introduction to cognitive science, examining ideas from cognitive psychology, philosophy, education, and linguistics via computational modeling and psychological experimentation. Department enforced prerequisite: graduate standing or at least one upper-division course in computer science, linguistics, philosophy, or psychology.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 6402 and LING 6200 and PHIL 6310 and PSYC 6200 and SLHS 6402

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6505 (1-2) Readings and Research in Cognitive Science

Interdisciplinary reading of innovative theories and methodologies of cognitive science. Share interdisciplinary perspectives through in-class and online discussion and analysis of controversial texts and of their own research in cognitive science. Required for joint PhD in cognitive science.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6506 (2) Cognitive Science Research Practicum

Independent, interdisciplinary research project in cognitive science for advanced graduate students pursuing a joint PhD in an approved core discipline and cognitive science. Research projects integrate at least two areas within the cognitive sciences: psychology, computer science, linguistics, education, philosophy. Students need commitments from two mentors for their project.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 7412 and LING 7415 and PHIL 7415 and PSYC 7415 and SLHS 7418

Requisites: Requires prerequisite course of CSCI 6402 or EDUC 6504 or LING 6200 or PHIL 6310 or PSYC 6200 (minimum grade D-). Restricted to graduate students only.

Recommended: Prerequisite EDUC 6505.

Additional Information: Departmental Category: Graduate Education

EDUC 6516 (2) Cognitive Science Research Practicum 2

Independent, interdisciplinary research project in cognitive science for advanced graduate students pursuing a joint PhD in an approved core discipline and cognitive science. Research projects integrate at least two areas within the cognitive sciences: psychology, computer science, linguistics, education, philosophy. Students need commitments from two mentors for their project.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 7422 and LING 7425 and PHIL 7425 and PSYC 7425 and SLHS 7428

Requisites: Requires prerequisite course of LING 7415 or PSYC 7415 or CSCI 7412 or EDUC 6506 (minimum grade D-). Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6705 (3) Leadership in Higher Education

Examines theory and research on leadership and management in higher education, and the structure and governance of colleges and universities. Explores the internal organization and culture of institutions, as well as external and related bodies that affect higher education such as the federal and state governments, accrediting agencies, associations and foundations.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 6804 (1-4) Special Topics

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6811 (3) Teaching and Learning Biology

Provides an introduction to recent research into student learning on the conceptual foundations of modern biology, together with pedagogical methods associated with effective instruction and its evaluation. Students will be involved in active research into conceptual and practical issues involved in biology education, methods to discover student preconceptions, and the design, testing and evaluation of various instructional interventions.

Equivalent - Duplicate Degree Credit Not Granted: EDUC 4811 and MCDB 4811 and MCDB 5811

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 6844 (1-4) Master's Independent Study

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6855 (1-4) Independent Study in Curriculum and Instruction---Master's Level

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6877 (1-4) Independent Study in Equity, Bilingualism and Biliteracy: Master's Level

An independent study may be established between a student and a tenure track faculty member if both parties are amenable. The topics, readings and assignments will vary based upon mutually agreed upon goals. The student will be responsible for obtaining and submitting the necessary paperwork from/to the Office of Student Services in the School of Education. This is a variable credit course that ranges from 1 to 4 credits. The number of credits will be determined by the professor based on the workload.

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6888 (1-4) Independent Study in Educational and Psychological Studies---Master's Level

Repeatable: Repeatable for up to 8.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6899 (1-4) Independent Study in Educational Foundations Policy & Practice--Master's Level

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6915 (1-4) Practicum in Curriculum and Instruction

Repeatable: Repeatable for up to 4.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6916 (1-4) Practicum in Research and Evaluation Methodology

Additional Information: Departmental Category: Graduate Education

EDUC 6918 (1-4) Practicum in Educational and Psychological Studies

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6919 (1-4) Practicum in Educational Foundations Policy and Practice

Repeatable: Repeatable for up to 4.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6925 (1-4) Readings in Curriculum and Instruction

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6926 (1-4) Readings in Research and Evaluation Methodology

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6927 (1-4) Readings in Equity, Bilingualism and Biliteracy

Explores topics that are relevant to becoming a scholar and researcher in our field.

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6928 (1-4) Readings in Learning Sciences and Human Development

Repeatable: Repeatable for up to 12.00 total credit hours.

Additional Information: Departmental Category: Graduate Education

EDUC 6929 (1-4) Readings in Educational Foundations Policy and Practice

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 6944 (1-3) Master's Candidate for Degree

Registration intended for students preparing for a thesis defense, final examination, culminating activity, or completion of degree.

Repeatable: Repeatable for up to 12.00 total credit hours.

Additional Information: Departmental Category: Graduate Education

EDUC 6945 (3) MA Capstone Seminar in Foundations of Education

Supports students completing a summative writing assignment for their Masters degree requirements. Writing assignments will be designed around the professional and academic goals of each student, in collaboration with the student's academic advisor. Students will analyze research studies across different disciplinary and methodological approaches. Through instructor coaching and peer review exercises, students will draft and refine a final assignment.

Requisites: Restricted to MA students in Education (EPSY-MA, EFPP-MA, HEDU-MA).

Grading Basis: Letter Grade

Additional Information: Departmental Category: Graduate Education

EDUC 6954 (1-6) Master's Thesis

Repeatable: Repeatable for up to 6.00 total credit hours.

Additional Information: Departmental Category: Graduate Education

EDUC 6964 (3) Capstone: Inquiry in the Content Areas

Supports students in using and building on the ideas and content encountered in previous coursework. Requires students to conceptualize, design and implement an original research project that will serve as exit requirement for the degree. Reads and engages in research and theory associated with Teacher Research (i.e. research conducted by teachers for professional purposes).

Requisites: Restricted to Educ-Curriculum Instruction (EDCI) graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 7015 (3) Teaching Internship in Teacher Education

One-semester teaching internship in an undergraduate or graduate foundations course.

Additional Information: Departmental Category: Graduate Education

EDUC 7055 (3) Philosophy of Education

Examines exemplars of educational philosophy from ancient times to the present day, emphasizing their relevance and application to current controversies in education (e.g., free speech, multiculturalism, and affirmative action). Formerly EDUC 5055.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 7105 (3) Collaboration to Meet Special Needs

Covers effective collaboration practices involving the special education teacher, other educational personnel, students, and parents. Bilingual special education considerations in collaboration will be described. Issues regarding inclusion will be explored. Practical application to teaching and learning will be made. Strategies for disseminating information and collaborative activities will be discussed.

Additional Information: Departmental Category: Graduate Education

EDUC 7115 (3) Critical Inquiry into Becoming a Teacher Educator

Designed to support doctoral students' development as university level instructors/teacher educators, particularly in relation to undergraduate courses that center equity and justice as central topics, this course will draw on critical perspectives and pedagogies to shape course goals, material/content and pedagogical approach. This will be done in two primary ways: a) through the use of pedagogies adapted from Freirean Culture Circles and Boalian Theater, and b) through the application of practitioner inquiry approaches designed to develop critical, reflective practices/habits of mind among teachers and teacher educators.

Requisites: Restricted to EDUC PhD students with plan codes EECD-PHD, EFPP-PHD, EDCI-PHD, EPSY-PHD or REME-PHD.

EDUC 7316 (3) Intermediate Statistical Methods

Studies sampling theory and inferential statistics; advanced applications for testing of hypotheses regarding central tendency, variability, proportion, correlation, and normality; chi-square and the analysis of frequency data; multiple regression and prediction; introduction to the analysis of variance; and related computer programs for statistical analysis.

Requisites: Requires prerequisite course of EDUC 5716 (minimum grade D-).

Additional Information: Departmental Category: Graduate Education

EDUC 7326 (3) Quasi-Experimental Design in Causal Inference in Social Sciences

Focuses on experimental and quasi-experimental designs in educational research; applications of the general linear model; power and statistical efficiency; randomization and control; multiple comparisons; factorial experiments and interaction with fixed-factor and mixed design; analysis of covariance; effects of assumption violations; and related computer programs for statistical analysis.

Recommended: Prerequisite of a graduate-level introduction to stats course.

Additional Information: Departmental Category: Graduate Education

EDUC 7336 (3) Methods of Survey Research and Assessments

Examines theory and techniques involved in each stage of survey research, including problem formulation, questionnaire development, interview and mailed surveys, assessing reliability and validity, sampling plans, data reduction (e.g., factor analysis), and analysis of continuous and categorical data.

Requisites: Requires prerequisite courses of EDUC 5726 and EDUC 7316 (all minimum grade D-).

Additional Information: Departmental Category: Graduate Education

EDUC 7346 (3) Ethnographic Methods in Educational Research

Explores the history of ethnography and its translation into educational research. Students practice participant observation, interviewing, journal writing, artifact searches, qualitative analysis and interpretation, and styles of reporting.

Requisites: Requires a prerequisite course of EDUC 6325 (minimum grade C-).

Additional Information: Departmental Category: Graduate Education

EDUC 7376 (3) Theory and Practice of Educational and Psychological Measurement

Introduces theories of measurement and applications, and presents classical test theory. Includes quantitative concepts, methods, and computational techniques for the development, application, and evaluation of measurement instruments in social/ behavioral science and education.

Requisites: Requires prerequisite course of EDUC 5716 (minimum grade D-).

Additional Information: Departmental Category: Graduate Education

EDUC 7386 (3) Educational Evaluation

Builds an understanding of the range of approaches taken by educational evaluators, focusing particularly on the evaluation of programs. Explores the nature of different evaluation perspectives and how these disparate views translate into methodological and conceptual models. Students develop a familiarity with the most common and influential approaches to evaluation.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 7396 (3) Latent Variable and Structural Equation Modeling

Introduces contemporary advanced multivariate techniques and their application in social science research. Focus on factor analysis and structural equation modeling. Prior experience with multiple regression is assumed.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite of EDUC 8230, EDUC 8240, EDUC 8710.

Additional Information: Departmental Category: Graduate Education

EDUC 7416 (3) Seminar: Research Methodology

Presents selected topics for advanced study in educational research, statistics, measurement, and evaluation.

Repeatable: Repeatable for up to 12.00 total credit hours.

Additional Information: Departmental Category: Graduate Education

EDUC 7446 (3) Policy Issues in Education

Explores major policy issues confronting U.S. education and examines the nature and undertaking of educational policy studies. Learn to approach policy issues from a contextual perspective that highlights systemic forces and analyzes and applies differing policy instruments. While a wide variety of policies are covered in the course, it particularly emphasizes issues of educational equity.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 7456 (3) Multilevel Modeling

Covers in depth two advanced multivariate models common to social science research: latent variable (structural equation) models and multi-level (hierarchical) models. Topics may be taught with a particular analytic context, such as measurement of change (longitudinal analysis) or experimental design.

Recommended: Prerequisite of one year of graduate-level stats course.

Additional Information: Departmental Category: Graduate Education

EDUC 7775 (1) Topics in Cognitive Science

Reading of interdisciplinary innovative theories and methodologies of cognitive science. Students participate in the ICS Distinguished Speakers series that hosts internationally recognized cognitive scientists who share and discuss their current research. Session discussions include analysis of leading edge and controversial new approaches in cognitive science.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 7772 and LING 7775 and PHIL 7810 and PSYC 7775 and SLHS 7775

Repeatable: Repeatable for up to 4.00 total credit hours.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8014 (3) Advanced Seminar in Democracy, Diversity and Social Justice

Addresses the sociopolitical context of multiculturalism and education, and the sociocultural context of learning. Examines critical issues involved in making schooling responsive to an increasingly multicultural and multilingual society.

Repeatable: Repeatable for up to 9.00 total credit hours.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8025 (3) Seminar: Curriculum Theories

Examines in depth recent developments in curriculum theory highlighting conceptual, contextual, and normative issues. Substantially explores distinct curricular traditions, corresponding conceptions of the good life along with related approaches to reason and emotion. Focuses on the works of prominent curriculum theorists.

Additional Information: Departmental Category: Graduate Education

EDUC 8045 (3) Philosophical Issues in Educational Research

Familiarizes students with important concepts and issues from the philosophy of science and, to a lesser extent, political theory and ethics; grounds such concepts and issues in the literature (often in terms of primary philosophical sources); and stimulates students to apply this material to the field of educational research in an informed way.

Requisites: Restricted to PhD students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8055 (3) Theoretical Issues in Education Policy

Provides students with an examination of the theories behind education policy analysis. Takes a thematic approach to the study of policy in order to understand how policy agendas are set; how democratic deliberation should be linked with research and policy; and the relationship between politics, media, social structures, research and policies.

Requisites: Restricted to PhD students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8100 (3) Historical and Contemporary Issues in Literacy Research

In this seminar, students read about, discuss, and respond to issues and debates that have shaped and continue to shape literacy research. The course addresses debates in response to research reports, policy and standards in the past 20 years (beginning in the mid 1990s), as well as the emergence of sociocultural and critical approaches to literacy research. The course traces how scholarly debates and reviews of research represent shifts in the field, and help researchers and educators move towards approaches and methods framing social-justice oriented literacy projects.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

EDUC 8101 (3) Theories of Literacy Research and Practice

This graduate seminar will examine the foundations and central tenets of influential theories that undergird scholarship in literacy studies. The theories explored will include Critical Race Theory (CRT), critical poststructuralist, feminist, queer, literary, affect, and sociocultural theories. Theoretical traditions will be examined through their historical and social movement roots through their current applications, debates, research techniques, and criticisms, always with particular attention to how they have been taken up in literacy research. A key focus of this course is to examine the utility and limitations of frameworks and consider their possible applications to students' own research.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

EDUC 8102 (3) Literacy Research Methods

This graduate seminar focuses on some of the central research methods and methodologies employed by literacy researchers. The course will examine methodologies such as ethnography, practitioner research, participatory research, reciprocal partnerships, discourse analysis, literary and textual analysis, design research, and case study, along with specific methods of data collection and analysis commensurate with study designs. Students will read articles focused on methodology specifically, as well as have opportunities to discuss research articles through a focus on the methods scholars describe and enact. The course includes attention to humanizing research practices and issues of relationship, responsibility, and ethics in literacy research. In addition, the course will engage discussions and support for IRB proposals, generative writing practices and processes, as well as dissemination of research through various genres and in academic, practice focused, and publicly accessible venues. May be repeated up

Repeatable: Repeatable for up to 6.00 total credit hours.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

EDUC 8103 (3) Special Topics in Literacy Research

This course provides students an opportunity for deep engagement with important topics and specialty areas in the field of literacy studies. Focused on topics of current interest in the field, the course supports students to examine issues of research and practice, which may include historical and current trajectories of an area of research, theories that animate an area of research and practice, and the methods through which researchers investigate questions related to the topic. In addition to readings and discussion, students complete writing and multimodal projects that allow students to engage with content and process related to the topic to demonstrate and share their learning.

Repeatable: Repeatable for up to 6.00 total credit hours.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

EDUC 8115 (3) History and Policy Issues in Teaching and Teacher Education

Examine how issues and dilemmas in teacher education are grounded in historical and political contexts. Analyze patterns in preparation of new teachers, in mechanisms used to govern entry into teaching and make determinations of quality of teachers and teaching, and in efforts to professionalize and de-professionalize teachers and teaching. Investigate contemporary teacher education debates to better understand potential research-policy-practice connections.

Requisites: Restricted to EDUC PhD students with plan codes EECD-PHD, EFPP-PHD, EDCI-PHD, EPSY-PHD or REME-PHD.

EDUC 8125 (3) Seminar: Radical Education Theories

Examines radical analyses of schooling, based on class, gender, sexual identity and race, through which U.S. public schooling is said to maintain dynamics of oppression and domination that undermines the schools' democratic premise. Scrutinizes the conceptual framework, interpretive and explanatory adequacy, and ethical justification of radical claims.

Additional Information: Departmental Category: Graduate Education

EDUC 8135 (3) Theories and Methodologies for Examining Teacher Learning

Examines the potential range and roles of theory in analyzing prospective and practicing teachers' learning (experiences). Explores various conceptions of teacher learning, including, but not limited to: teacher learning as a knowledge-centric phenomenon; teacher learning as a process of assembling a repertoire of practice; teacher learning as an identity-work phenomenon; and teacher learning as an activist/action-in-the-world phenomenon.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8145 (3) Designing for Teacher Learning and Teacher Education

Examines questions and issues related to the design of preservice teacher education programs and practicing teachers' professional development/learning opportunities. Analyzes the program and/or learning opportunity conditions, features and approaches that potentially support and/or constrain prospective and practicing teachers' learning, particularly in relation to their development and as asset-oriented teachers.

Additional Information: Departmental Category: Graduate Education

EDUC 8155 (3) Advanced Topics in Literacy Education

Examines special topics in theory and research related to literacy and literacy education. Topics vary each semester.

Repeatable: Repeatable for up to 12.00 total credit hours.

Additional Information: Departmental Category: Graduate Education

EDUC 8165 (3) Advanced Topics in Mathematics Education

Examines special topics in theory and research related to mathematics education. Topics vary each semester.

Repeatable: Repeatable for up to 12.00 total credit hours.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8175 (3) Advanced Topics in Science Education

Engages participants in the process of curriculum development. Principles that guide the development of curricula and learning environments are discussed as they integrate with learning theory. Participants develop and/or test specific activities in the classroom and modify them as a result. There is a particular focus on incorporating the practices of the discipline into each content-based activity.

Repeatable: Repeatable for up to 12.00 total credit hours.

Additional Information: Departmental Category: Graduate Education

EDUC 8177 (3) Advanced Seminar in Curriculum and Policy in Mathematics & Science Education

This course explores the changing curriculum in school mathematics and science. It will examine the history and evolution of K-20 math and science curricula from the late 1890s to current times. It will examine motivations and political forces that have help shape and change math and science curricula.

Grading Basis: Letter Grade

EDUC 8178 (3) Advanced Seminar on Learning in Math & Science Education

This course focuses on research on the learning of mathematics and science in the K-12 schooling environment. It serves to introduce students to seminal learning theories that have guided and shaped mathematics & science education over the past thirty years (e.g., constructivist, cognitive, situative/sociocultural and critical perspectives). Core ideas within each of these theoretical perspectives will be explored such as knowledge construction and conceptual change, argumentation and reasoning, classroom discourse processes, participation and identity, and access and power. Pragmatic implications of these different theoretical perspectives will also be examined. For example, questions such as the following are considered: What is the purpose of a theory of learning (e.g., for research, for practice)? What constitutes learning within each perspective? What are the implications of a particular theoretical perspective for organizing and analyzing learning environments? What are the implications for differences

Grading Basis: Letter Grade

EDUC 8179 (3) Advanced Seminar in Mathematics and Science Teaching & Teacher Education

This course examines how scholarship on teaching and teacher learning has been evolving in mathematics and science educational research since the 1980s and 1990s. Students will explore theories of teacher learning and how they relate to designs for teacher preparation and professional development. We will also study common designs and design principles for conducting research to study teaching and teacher learning.

Grading Basis: Letter Grade

EDUC 8210 (3) Ways of Knowing in Educational Research

Introduces students to various theoretical perspectives informing educational research and how they are employed to study teaching, learning, and policy in K-12 classrooms. Includes reading and discussion related to the assumptions, questions, methods, and findings associated with theoretical traditions within and across disciplines.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8220 (3) Introduction to Educational Research and Policy

Introduces conceptual and empirical issues and controversies in educational research and policy. Complements other EDUC doctoral courses in quantitative and qualitative methodology.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8230 (3) An Introduction to Quantitative Methods in Educational Research

Explores the use of statistics to formalize study designs in educational research contexts. Introduces causal inference, experimental design, descriptive statistics, linear regression, probability, and the basics of statistical inference. Includes lab-based instruction in the use of statistical software (e.g., R, Excel) to conduct data analysis.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8240 (3) Applied Regression Analysis

Statistical analysis can be a powerful tool for understanding social, educational, psychological, and developmental processes. In this course, we will learn to answer such questions using multiple regression analysis, to develop an understanding of the strengths and limitations of this approach, and practice communicating results clearly and accurately. By the end of the semester, students in this course should be able to critically examine published research using regression and carefully perform their own regression analyses using empirical data.

Recommended: Prerequisites of EDUC 8230 or another course in basic statistical methods.

Additional Information: Departmental Category: Graduate Education

EDUC 8250 (3) Qualitative Research Methods in Education

This course has three main goals. First, it introduces students to the purposes of qualitative research methods in education foregrounding issues of equity and justice. Second, it develops students' capacity to design consequential qualitative research through consideration of issues including power and ethics. Third, it supports students in reading and analyzing qualitative research with attention to the relationship between theory and data, answerability to communities and contexts, and diverse and creative ways of representing research.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8260 (3) Qualitative Methods II

Builds on EDUC 8250 to develop knowledge and skills in ethnographic and case study research. Second of a two-course sequence covering qualitative research design, theoretical perspectives, and methods.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8270 (3) Intermediate and Advanced Application of Quantitative Methods for Behavioral Sciences

This courses helps students develop the pragmatic skills needed to conduct quantitative analyses in their own research, in which they must apply concepts with novel data and in novel settings. It also provides a formal introduction to a variety of interstitial topics in quantitative analysis that may be assumed knowledge in more advanced methods courses. In addition, students will learn how to teach themselves new quantitative methods as they need them in their future careers.

Requisites: Requires prerequisite courses of EDUC 8230 and EDUC 8240 (all minimum grade B-).

EDUC 8310 (3) Design of Learning Environments for Radical Possibilities

Design is a tool for imagining radical new possibilities for living together. We will discuss how we can work with community and school partners to leverage cultural and historical resources in design. This course will introduce students to models of design and tools for participatory design used across the Global North and South that can promote individual, social, and institutional change. It will include attention to political, affective, and ethical dimensions of design, as well as explore dilemmas presented by faculty and students engaged in ongoing design projects.

Requisites: Restricted to graduate students only.

EDUC 8348 (3) Human Development in Cultural, Historical, and Sociopolitical Contexts

This course takes a critical approach to exploring the moral, sociopolitical, and bio-psychosocial dimensions of human development. It will introduce students to different theories and methods for studying human development across the lifespan. Many traditional approaches to developmental research treat development in Western Educated Industrialized Rich and Democratic (WEIRD) contexts as normative for all populations. This course will focus on approaches that reject the notion that processes of human development are universal, examining the ways that social, cultural and geographic environments and histories shape development and life trajectories.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite EDUC 6318 or EDUC 8210 or instructor consent.

Additional Information: Departmental Category: Graduate Education

EDUC 8358 (3) Critical Introduction to Learning Theory and Practice, Part 1

This course introduces historical and contemporary perspectives in the learning sciences. Areas of scholarship explored include cognition, behaviorism, and sociocultural approaches. Special attention is paid to the linked histories of these traditions in order to broadly explore what concepts are foundational for critical understanding of cultural, historical, social, embodied, and political aspects of learning. The course explores critiques of relevant fields while also exploring how new ideas and movements are generative for moving research and development toward liberatory aims.

Recommended: Prerequisite EDUC 6318 or EDUC 8210.

Additional Information: Departmental Category: Graduate Education

EDUC 8359 (3) Critical Introduction to Learning Theory and Practice, Part 2

This course builds on content central to Part 1 of Critical Introduction to Learning Theory and Practice, which explores historical and contemporary perspectives in the learning sciences. Special attention is paid to theory and practice which is currently at the leading edge of research and development in the learning sciences, while attending to their roots. This course addresses multiple epistemologies and ways of knowing, including global perspectives and critical theories such as feminist, indigenous, and queer approaches. The course also examines how learning theories can inform transformation of practice toward justice and equity.

Requisites: Requires prerequisite course of EDUC 8358 (minimum grade D-).

EDUC 8605 (3) Research and Professional Ethics for Educational Researchers

Examines the central issues and venerable theories of philosophical ethics that have historically framed research ethics. Also examines contemporary ethical theory that emphasizes a greater attention to the social sciences. Focuses on research ethics (both research of human subjects and research misconduct), various issues of professional academic ethics, and the AERA ethical code.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8610 (3) Advanced Topics in Educational Equity and Cultural Diversity

Examines special topics in theory and research related to educational equity and cultural diversity in education. Topics vary each semester.

Repeatable: Repeatable for up to 12.00 total credit hours.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8615 (3) Designing for Linguistic Diversity in Education Research

Examines ways in which issues of language can affect the validity of educational research. Discusses how language can be properly addressed with a multidisciplinary perspective through different stages in the process of an investigation, including design, sampling, data collection, and data analysis. Provides the conceptual basis for addressing linguistic diversity from a multidisciplinary perspective.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8620 (3) Language and Power

Through language we enact positionality and identity. Language has the power to shape our assumptions and beliefs. This course explores the relationship between linguistic nationalism and xenophobia, bilingual education and accent discrimination, multilingualism and youth culture, code-switching and translanguaging, etc. Participants will analyze domestic policies and current events to understand how language serves to maintain or disrupt the status quo.

EDUC 8630 (3) Bilingual and Biliterate Development in Children and Adolescents

This advanced doctoral seminar introduces doctoral students to key theories and empirical research on bilingual and biliterate development in school age children (preK & 12). Participants will explore sociolinguistic, sociocultural, and psycholinguistic perspectives of the language and literacy development of children growing up with two or more languages, and critically examine how varying educational contexts and policies impact the schooling experiences of bilingual learners from early childhood to late adolescence.

Recommended: Doctoral students only.

Grading Basis: Letter Grade

EDUC 8640 (3) Rethinking Disability

Students explore the foundations, trends and future directions of disability in education. Disability is socially, historically, and culturally constructed. It is one of multiple identities that make us human, rather than a problem in need of a cure. This course investigates and disrupts disparities in education that relate to the intersections of disability, culture, race, language, and other identities and explores models for success.

Requisites: Restricted to graduate students only.

EDUC 8710 (3) Measurement in Survey Research

Introduces students to classical test theory and item response theory. Emphasizes the process of developing, analyzing and validating a survey instrument. Focuses on developing a survey instrument with items that derive from a clearly delineated theory for the construct to be measured. Analyzes item responses and put together a validity argument to support the proposed uses of the survey.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8720 (3) Psychometric Modeling: Item Response Theory

Focuses on psychometric models for measurement and their applications in educational and psychological research. Emphasizes understanding and evaluating the utility of models from item response theory (IRT). Applies and compares measurement models in the context of simulated or empirical data sets.

Recommended: Prerequisite EDUC 8710.

Additional Information: Departmental Category: Graduate Education

EDUC 8730 (3) Advanced Qualitative Data Analysis

Requires students begin semester with qualitative data already collected (from class project, pilot study, dissertation). Instructors present diverse methods of analyzing data and writing about interpretations. Instructors customize part of course to address specific topic of expertise, e.g., discourse analysis, video analysis, textual analysis, ethnographic analysis.

Repeatable: Repeatable for up to 12.00 total credit hours.

Additional Information: Departmental Category: Graduate Education

EDUC 8731 (3) Principles and Practices of Community-Based Participatory Research

The course topics are organized to follow the life cycle of a community-based participatory research project. Topics include: Map the landscape of participatory and community-based approaches to research; Draw on critical social theory to analyze issues of race, power, and coloniality; Examine arguments about rigor, validity, and generalizability; It is recommended that students have a collaborative research project with communities or schools to workshop during the semester, but this is not required. Previously offered as a special topics course.

EDUC 8732 (3) Critical Approaches to Discourse Analysis in Qualitative Research

This course will introduce theories and methods related to Critical Discourse Analysis (CDA) in educational settings. The overarching goal of this course is to ground and inspire students to approach their own data with confidence and creativity. We explore key issues in the theory and practice of critical analysis of discourse: study design, data collection, transcription, tools for analysis, and presentation/write-up. The course will explore foundational readings in CDA along with a range of examples.

Requisites: Prerequisite: EDUC 8250 Qualitative Methods (or equivalent Intro to Qual course)

EDUC 8735 (3) Mixed Methods in Educational Research

Examines the epistemological and methodological issues involved in conducting studies with mixed methods designs in educational settings. Explores the pragmatic foundations of mixed methods research, developing coding systems, calculating interrater reliability statistics, data collection strategies, making inferences, and writing up mixed methods research reports. All students in the course are expected to have a solid background in both qualitative and quantitative approaches to research. Formerly offered as a special topics course.

Requisites: Restricted to graduate students only.

EDUC 8740 (3) Advances in the Assessment of Student Learning

Focuses on theories underlying traditional and contemporary proposals for assessment of student learning, and design and research of large-scale and classroom-based methods to assess student learning. Explores intersections between large-scale and classroom assessment, although greater attention is given to issues related to classroom assessment.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8750 (3) Research in Teaching and Teacher Education

Invites students to acquire a deeper understanding of the history of and challenges in teacher education research, strengthen their knowledge of theoretical and methodological approaches to the study of teacher education, and discuss their own potential contributions to the field.

Requisites: Restricted to EDUC PhD students with plan codes EECD-PHD, EFPP-PHD, EDCI-PHD, EPSY-PHD or REME-PHD.

EDUC 8804 (3) Special Topics

Designed to meet needs of graduate students with topics of pertinent interest.

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Graduate Education

EDUC 8844 (1-4) Doctoral Independent Study

Repeatable: Repeatable for up to 8.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8855 (1-4) Independent Study in Curriculum and Instruction: Doctoral Level

Repeatable: Repeatable for up to 8.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8866 (1-4) Independent Study in Research and Evaluation Methodology: Doctoral Level

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8877 (1-4) Independent Study in Equity, Bilingualism & Biliteracy: Doctoral Level

An independent study may be established between a doctoral student and a tenure track faculty member if both parties are amenable. The topics, readings and assignments will vary based upon mutually agreed upon goals. The student will be responsible for obtaining and submitting the necessary paperwork from/to the Office of Student Services in the School of Education. This is a variable credit course that ranges from 1 to 4 credits. The number of credits will be determined by the professor based on the workload.

Repeatable: Repeatable for up to 8.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8888 (1-4) Independent Study in Learning and Human Development: Doctoral Level

Repeatable: Repeatable for up to 8.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8899 (1-4) Independent Study in Educational Foundations Policy and Practice: Doctoral Level

Repeatable: Repeatable for up to 8.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8935 (1-6) Internship in Curriculum and Instruction

Repeatable: Repeatable for up to 24.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8936 (1-6) Internship in Research and Evaluation Methodology

Repeatable: Repeatable for up to 36.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8938 (1-6) Internship in Learning Sciences and Human Development

Repeatable: Repeatable for up to 24.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8939 (1-6) Internship in Educational Foundations Policy and Practice

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: Graduate Education

EDUC 8940 (3) Scholarly Writing for Graduate Students

Provides graduate students an opportunity to reflect on their current writing process, on their identity as an academic writer, and how their writing is shaping and being shaped by their emerging scholarship. Explores genres of academic writing, processes of peer review, and publication as students engage in weekly writing assignments that build toward a complete manuscript. Students should enter the class with a draft of an existing paper that they intend to work on.

EDUC 8950 (3) Proposal and Dissertation Writing

Provides students with ongoing opportunities to write social science research in the context of the design, analysis and data representation, development, and write-up of students' dissertation proposals and dissertations. Students will learn to expand how they think about and use evidence, clarify their ideas and arguments, and improve their writing. Students working on proposals and dissertations should enroll.

Repeatable: Repeatable for up to 6.00 total credit hours.

Requisites: Restricted to EDUC-PHD students.

Additional Information: Departmental Category: Graduate Education

EDUC 8994 (1-10) Doctoral Dissertation

Repeatable: Repeatable for up to 60.00 total credit hours.

Additional Information: Departmental Category: Graduate Education