CURRICULUM & INSTRUCTION (EDCI)

Courses

EDCI 5001. Python Program for Educators. 4 Credits.
Covers the fundamentals of programming, using the Python programming language. Students will write non-trivial Python programs, assess programming assignments, read, analyze and discuss relevant literature in CS and Education and create lesson plans and other CS resources for their teaching practice.

EDCI 5002. Java Programming for Educators. 4 Credits.
Intermediate programming concepts including common data structures, algorithms, design, documentation, testing and debugging techniques, and an introduction to object-oriented programming. Focuses on learning fundamentals of Java programming and the pedagogical theories, principles methods for integrating Java into the grade 7-12 classroom. Prerequisite: EDCI 5001.

EDCI 5003. Web Design for Educators. 4 Credits.
Covers the fundamentals of HTML, CSS, working with images, PHP programming, and web design needed to create a functional website. Assess programming assignments, read, analyze, and discuss relevant literature in CS and education and create lesson plans and other CS resources for students' teaching practice. Prerequisites: EDCI 5001, EDCI 5002.

EDCI 5004. Computer Organization for Educ. 3 Credits.
Covers computer system organization including performance, assembly language, machine-level data representation, arithmetic for computers, processor datapath control, memory, and input/output. Students will read, analyze, and discuss education literature and create lesson plans/units and other CS resources for their teaching practice. Prerequisites: EDCI 5001, EDCI 5002, EDCI 5003.

EDCI 5005. Data Science for Educators. 3 Credits.
Extracting meaning from data remains one of the most important tasks of research and industry. The modern age of computers and the Internet has made vast amounts of data available, making it more important than ever to understand how to collect, process, and analyze these data ethically and responsibly. Focuses on learning data science fundamentals and the pedagogical methods to integrating data science into the grade 7-12 classroom. Prerequisites: EDCI 5001, EDCI 5002, EDCI 5003, EDCI 5004.

EDCI 5043. Fndns in Ed for Sustainability. 3 Credits.
Prepares educators to use sustainability as an integrating lens for learning. Provides an introduction to Education for Sustainability (EFS), an approach that links teaching of social, environmental, and economic systems to foster the knowledge, inquiry, and action needed to build a healthy and just future for communities, both locally and globally.

EDCI 5044. Mthds in Ed for Sustainability. 3 Credits.
Explores designing for education for sustainability (EFS). Participants should have a foundation in EFS, associated pedagogies, and curriculum or project development strategies. Action-oriented, culminating in a project or curriculum to implement. Prerequisite: EDCI 5043.

EDCI 5045. Trnsfrm Ldrshp Edu for Sustain. 3 Credits.
Focuses on developing students' education for sustainability leadership practices and offers tools to transform ourselves and our community. Explores a whole-systems and ecological approach for leading change in complex and emergent times. A core element of this course is the community that will be co-developed through collective work. Prerequisite: EDCI 5043. Co-requisite: EDCI 5044.

EDCI 5046. Edu for Sustain Inquiry Action. 3 Credits.
Designed to support practitioners advanced in EFS. In collaboration with education experts, systems-thinking and leadership, students will developing a peer network committed to ecological integrity, economic vitality, and social justice. Students will also use inquiry and action research frameworks to investigate a personally meaningful question about their EFS practice. Prerequisite: EDCI 5043. Co-requisites: EDCI 5044, EDCI 5045.

EDCI 5099. Queer Studies in Education. 3 Credits.
Designed for educators, administrators, school staff, counselors, and others interested in queer issues in education. Cover 4 topics: history of LGBTQIA+ people & topics in US education; including LGBTQIA+ people and issues in curriculum, policies, and other school material; using a queer pedagogy framework to rethink professional approaches and materials; supporting LGBTQIA+ people in educational settings using the theoretical framework of queer cultural capital.

EDCI 5990. Special Topics. 1-18 Credits.
See Schedule of Course for specific titles.

EDCI 5993. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

EDCI 5994. Teaching Assistantship. 1-3 Credits.
Student service as a teaching assistant, usually in an introductory-level course in the discipline, for which credit is awarded. Offered at department discretion.

EDCI 6008. Curriculum Theory. 3 Credits.
Explores curriculum theory from a practitioner-oriented perspective and critical stance. Investigates how dominant social, political, and economic ideologies influence teaching and learning priorities. Aims to unsettle dominant curricular imaginaries to inquire about what else curriculum might be and become. Engage curriculum theories practiced and posed by educators, policy makers, scholars, school leaders, and youth leaders.

EDCI 6009. Critical Pedagogies. 3 Credits.
Explores the philosophical and sociological underpinnings of various critical social, decolonial, and anticolonial theories and how they have contributed to educators' pedagogical practice. Course themes include: education as the practice of freedom, the theorization of criticality and critical social theory, critical pedagogies in practice, and youth influence on critical pedagogical practices.

EDCI 6210. Learning, Design & Technology. 3 Credits.
This course examines the relationship between learning theory and technology integration in K-12 classrooms and integrates backward design in standards-based units of study. Prerequisite: Teaching experience.

EDCI 6250. Leadership and Technology. 3 Credits.
This course explores leadership and the role of the Integration Specialist and/or teacher leader in the context of educational technology integration planning.

EDCI 6310. Society, Stress and the Brain. 3 Credits.
Explores brain development and the learning process under complex social conditions such as poverty, instability, and fear. Students study the effects of stress on learning and consider methods of instruction and interaction that address developmental needs of children and families from diverse contexts.

EDCI 6391. Master's Thesis Research. 1-18 Credits.
Thesis topic must be approved by a faculty committee. Credit as arranged.

EDCI 6800. Professional Problems in Ed. 3 Credits.
Designed to cover selected educational problems in depth. The major emphasis will be on intensive and critical analysis of the literature and practice in a given area.

EDCI 6990. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

EDCI 6991. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

EDCI 6993. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

EDCI 6995. Graduate Independent Research. 1-18 Credits.
Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.