LEARNING SCIENCES (LRN_SCI)

LRN_SCI 200-0 Introduction to Learning Sciences (1 Unit) This class will serve as an introduction to the learning sciences through reading foundational texts in the areas of cognition, context, and design; and exploring seminal learning environments from Northwestern's Learning Sciences community.

LRN_SCI 201-0 Cognition and Action (1 Unit) Perspectives on thinking and learning; how individuals reason and accomplish tasks, both on their own and in interaction with each other and with their immediate environments.

LRN_SCI 202-0 Culture, Language, & Identity (1 Unit) Social and cultural dimensions of learning, particularly how diverse linguistic and cultural tools mediate forms of identity, learning experiences, and participation in and transformation of social life.

LRN_SCI 214-0 Culture and Cognition (1 Unit) Explore the cultural ground of cognition. How do cultural environments structure and orient our conceptual knowledge, and how do these cognitive processes feedback into cultural systems? Key topics include conceptual development, knowledge organization, causal reasoning, moral psychology, and environmental psychology. Jointly, the topics are integrated through a focus on social and ecological thought. We will engage in cultural artifact analyses, field experiences, and research inquiries. Combined with LOC 214-0; may not receive credit for both courses.

LRN_SCI 224-0 Holocaust Education Design (1 Unit) Explore the possible goals of educating about the Holocaust, the merits and challenges of addressing all of the Nazis' target groups, and the relationships between Holocaust education and educating about atrocities more broadly. Explore appropriate and inappropriate teaching methods and we will consider the design of training for Holocaust educators across formal and informal learning environments.

LRN_SCI 230-0 Introduction to Teaching and Learning (1 Unit) This course explores the nature of learning and the implications for what it means to teach, with a particular focus on teaching and learning in US K-12 schools. To do so, we will explore and critique theories of learning and investigate how those theories have animated our own experiences as learners in schools. We will examine the various purposes of schooling and how these ideologies, coupled with theories of learning and societal forces, have worked to produce inequitable conditions and outcomes for students in US schools. We will then consider what it means to teach in ways that lead to learning and more equitable outcomes, drawing on cases that make the hidden work of teaching visible. Finally, we will apply what we've learned about learning, teaching, and schooling to analyze contemporary debates in education and how they are covered by the media. *Social Behavioral Sciences Distro Area Social and Behavioral Science Foundational Discipl*

LRN_SCI 251-0 Special Topics in Learning Sciences (1 Unit) Foundational work on special topics.

LRN_SCI 301-0 Design of Learning Environments (1 Unit) Conceiving, building, and testing products and services to help people learn. Topics include the human-centered design process, principles for designing learning environments, and agile project management and communication techniques.

LRN_SCI 302-0 Social, Cultural, and Linguistic Contexts of Education (1 Unit) This course focuses on the social and contextual influences of education, from a learning, teaching, research, and policy perspective. We will examine the role or race, ethnicity, class, gender, sexuality, and identity in the ways individuals and groups influence and are influenced by our education system.

LRN_SCI 308-0 Redesigning Everyday Organizations (1 Unit) Concepts and methods for understanding and studying cognition and learning and putting these concepts and methods to use in a design/change project. Combined with LOC 308-0; may not receive credit for both courses.

LRN_SCI 309-0 Inclusive Making (1 Unit) The goals of this course are to push students to 1) critically explore Making as a practice that promotes democratization, 2) develop interfaces that allow a broader population of students to participate in digital fabrication and 3) design artifacts that positively impact accessibility and inclusivity. The course will include guest speakers, laboratory portions and a projects that encourages students to develop publishable scholarship and/or functional prototypes, as they work in interdisciplinary teams. This is a hands-on project course. All students will design and implement interactive technologies. For this reason you will be expected to do computer programming and digital fabrication. However, all projects can be completed in teams. Hence, it is not essential that all students come with prior knowledge in computer programming and digital fabrication. Additionally, a portion of class and office hours will be devoted to helping students gain familiarity in basic digital fabrication and computer programming.

LRN_SCI 313-0 Tangible Interaction Design and Learning (1 Unit) Explores the use of tangible interaction to create innovative learning experiences, including distributed cognition, embodied interaction, cultural forms, and design frameworks. Combined with COMP_SCI 313-0; may not receive credit for both courses. Prerequisite: COMP_SCI 110-0.

LRN_SCI 318-0 Text Mining for Education, Organizations, and Social Science Research (1 Unit) This course is an introduction to the methods of text mining for students across the School of Education and Social Policy to develop an understanding of machine learning and the underpinnings of modern AI.

LRN_SCI 326-0 Design of Technological Tools for Thinking and Learning (1 Unit) Constructionist approach to design. Participants discuss learning design literature, critique software, and design and build computer-based learning environments (CBLE).

LRN_SCI 338-0 Computational Tools for Justice and Inquiry-based Learning (1 Unit) Theory and practice of designing school environments that integrate new technologies and media. Combined with TEACH_ED 338-0; may not receive credit for both courses.

LRN_SCI 351-0 Topics in Learning Sciences (1 Unit) Advanced work on special topics.

LRN_SCI 360-0 Sports, Technology and Learning (1 Unit) Sports, Technology and Learning will examine the apparent alignment and discrepancies among these three areas. Students will read conference and journal papers, watch sports-related movies, critique existing sports-related technologies and prototype their own technologies. Some elements of the course will involve students using different computer programming tools. However, no prior experience with programming is required. Cannot take and receive credit for more than one of LRN_SCI 360-0, LRN_SCI 351-0 "Sports, Technology and Learning," COMP_SCI 397-0 "Sports, Technology and Learning," and COMP_SCI 497-0 "Sports, Technology and Learning.,

LRN_SCI 372-0 Designing and Constructing Models with Multi-agent Languages (1 Unit) Exploration and analysis of multi-agent models, which simulate "emergent" scientific phenomena in a wide variety of

content domains. Combined with COMP_SCI 372-0; may not receive credit for both courses.