

## Education (EDUC)

### Courses

#### **EDUC 010 Applied Learning Sciences 3 Credits**

Explores key topics in the learning sciences that impact student learning, including cognitive processes, motivational theories, and their application to academic work. Students will engage in project-based learning as they apply research-based strategies to their own environments and create new ways to support the success and wellbeing of their fellow Lehigh undergraduates.

#### **EDUC 185 Instruction in Context 3 Credits**

Students will explore how to design effective learning experiences tailored to specific contexts, including formal education, corporate training, and community settings (e.g., science education centers, libraries). Through hands-on projects, they will develop materials/content to create engaging, impactful instruction.

#### **EDUC 187 Human-Centered Research and Evaluation 3 Credits**

Students will learn how to design and implement assessments, evaluate outcomes, and conduct research to inform and improve products (e.g., websites, apps), programs (e.g., trainings, workshops), and academic courses. Emphasis is placed on gathering quantitative and qualitative insights, data-driven decision making, and creative problem-solving to enhance user experiences.

#### **EDUC 354 Current Challenges in Learning Sciences 3 Credits**

Special topics related to the learning sciences. Through the application of design-thinking project-based learning, students will assess selected real world challenges in the learning sciences and propose creative solutions.

#### **EDUC 364 Social, Cultural, and Systems Perspectives on Learning 3 Credits**

Examines how historical legacies, communities, institutions, and broader societal structures shape learning environments and processes. Students will critically analyze the complex interplay between identity and systemic factors in learning contexts.

#### **EDUC 365 Self-Reflection for Transformation: Strengthening Racial Competency as Antiracist Action 3 Credits**

This class explores the complex ways that racial identity functions in individuals' personal and societal contexts with an emphasis on systemic racism. This class engages students in deeply reflective personal narrative writing as a transcendent experience and driver of personal growth; this personal growth can then aid students in changing the world around them.

**Attribute/Distribution:** DEIN

#### **EDUC 375 (CGH 375, HMS 375) Community Based Participatory Research Methodology 3-4 Credits**

The course provides an introduction to the core concepts of community based participatory research (CBPR) methodology applied to social science research to address public health issues. The course will equip students with strategies for developing community academic partnerships as well as to strengthen skills in research methods.

**Attribute/Distribution:** SS

#### **EDUC 383 Supervised Research in Applied Psychology 1-3 Credits**

Provides junior and senior undergraduates a formal supervised research experience in applied psychology. Students are assigned for the semester to a research team led by a participating faculty member in the College of Education.

**Repeat Status:** Course may be repeated.

#### **EDUC 388 Statistical Computing 3 Credits**

Use of one or more major statistical software packages. Principles of data coding, editing, integrity checking, and management. Emphasis on link between personal computers, mainframes, and other software.

**Prerequisites:** EDUC 408

#### **EDUC 391 Educational Linguistics 3 Credits**

Study of language form, language function, and language varieties, among other topics. By collecting and analyzing learner language, students will develop a solid foundation of the system of English, both as it exists and as it is used. Applying this linguistic knowledge to practice, students will learn how to identify learners' linguistic needs; to set priorities and to establish goals for multilingual learners (MLs); and to embed target language forms in authentic tasks.

#### **EDUC 394 Special Topics In Education 3 Credits**

**Repeat Status:** Course may be repeated.

#### **EDUC 401 Globalization and Contextualization 3 Credits**

The goal of the course is to clarify what globalization is and to consider the impact of globalizing ideas, structures, and cultures on education, and how educators and other stakeholders respond given their school's or system's unique global context. Through case studies and discussions with real-world school leaders, students explore ways that policies are "borrowed" and both educational cultures and structures are "institutionalized."

#### **EDUC 402 Developmental Psychology 3 Credits**

Survey of theories and research concerning perceptual, cognitive, social, and personality development across the lifespan. Must have graduate standing.

#### **EDUC 403 Research 3 Credits**

Basic principles of research; techniques of gathering and analyzing data; design of studies in education. Emphasis on critical reviews of research reports representing various methodologies. Research report required.

#### **EDUC 404 Globalization and Curriculum Implications 3 Credits**

Investigates impact of globalization on curriculum and how curriculum has been utilized in nation building; how tensions between the global and the local are inherent in curriculum; and how curriculum is a site of construction of national and global identities. Global citizenship is one of the major curricula themes of the dynamic intersection between the global and the local. Several theoretical perspectives are presented; curricula are compared across nations to understand how globalizing curricula differs according to culture and language.

#### **EDUC 405 Qualitative Research Methods 3 Credits**

This course explores foundational topics in qualitative research. Its purpose is to provide students with knowledge of qualitative design and data collection techniques that will enhance the quality of their graduate work and strengthen their research-mindedness. To accomplish these goals, the course examines the rich epistemological tradition of qualitative research and its wide range of methodologies. Tenets of rigorous approaches common to most qualitative inquiry are highlighted throughout the course. This course emphasizes foundational hands-on research skills.

#### **EDUC 406 Social Emotional Learning in Context 3 Credits**

This course takes students from a beginning understanding of social and emotional learning (SEL) and its relevance for educators to an understanding of practices that can be used in schools to promote resilience, wellness, and positive developmental outcomes for all students. Students will examine how the research grounded in different theoretical traditions frames social and emotional wellness and will evaluate whether the practices identified in research can address the needs of specific student populations.

#### **EDUC 407 Grant Writing and Fund Raising in Education 3 Credits**

This course provides a comprehensive overview of the grant writing process. All aspects of grant preparation and writing will be reviewed, including preparing to write a grant, identifying funding sources, developing a grant idea, preparing a proposal, determining appropriate funding agencies, and evaluating grant quality.

#### **EDUC 408 Introduction to Statistics 3 Credits**

Organization and description of data. Principles of statistical inference including hypothesis testing, interval estimation, and inferential error control. Emphasis on application.

**EDUC 409 Analysis of Experimental Data 3 Credits**

Emphasis on analysis of variance designs including one-way, factorial, nested, and repeated measures designs. Introduction to multiple regression and the analysis of covariance.

**Prerequisites:** EDUC 408

**EDUC 410 Univariate Statistical Models 3 Credits**

The univariate general linear model. Principles of expressing models and hypotheses about those models. Emphasis on similarity among the analysis of variance, multiple regression, and the analysis of covariance. Examples of nonstandard models and generalization to complex designs.

**Prerequisites:** EDUC 409

**EDUC 411 Multivariate Statistical Models 3 Credits**

The multivariate general linear model. Principles of expressing multivariate models and hypotheses about those models. Emphasis on similarity among the multivariate analysis of variance, multiple regression, and the analysis of covariance. Examples of non-standard models and generalization to complex designs.

**Prerequisites:** EDUC 410

**EDUC 412 Advanced Applications of Psychometric Principles 3 Credits**

Conceptual examination of exploratory and confirmatory factor analysis, cluster analysis, latent-trait modeling, and other advanced psychometric topics.

**Prerequisites:** EDUC 409 or EDUC 410 or EDUC 411 or SCHP 427 or CPSY 427

**EDUC 413 Hierarchical Linear Modeling 3 Credits**

This course is designed to introduce students to the theoretical underpinnings and basic applications of hierarchical linear modeling (HLM). At the end of the course, students will understand when HLM is the appropriate analysis of choice as well as be able to analyze multilevel data. Both cross-sectional and longitudinal nestedness will be considered. An understanding of regression analyses is essential for success in this course and is a prerequisite to this class.

**Prerequisites:** EDUC 410 or EDUC 411

**EDUC 414 Structural Equation Modeling 3 Credits**

Analysis and interpretation of a variety of structural equation modeling (SEM) procedures including path analysis, confirmatory factor analysis, factorial invariance, full structural equation models, and latent growth models. Understanding and critiquing both theoretical and applied literature relevant to SEM.

**Prerequisites:** EDUC 410 or EDUC 411

**EDUC 415 3 Credits**

This course explores qualitative data analysis and the process of writing qualitative findings. The course aims to enhance students' understanding of the complexities of qualitative data analysis by focusing on its customized nature and its interdependence with qualitative data collection and writing. The course will emphasize hands-on skills integral to qualitative analyses, including applying theoretical frames, creating and executing a tailored data analysis plan, systematically coding data, describing and interpreting data patterns, and writing cohesive qualitative findings.

**Prerequisites:** EDUC 405

**EDUC 419 Second Language Acquisition 3 Credits**

Introduces theories of second language acquisition (SLA) and explores current research that addresses the psycholinguistic, affective, and sociocultural dimensions of learning a second language (L2), specifically as they relate to multilingual learners (MLs). SLA theory is fundamental to ESL practitioners' training in teaching and supporting MLs effectively. Although this course has a theoretical focus, practical understanding of how to apply these theories in teaching will also be emphasized.

**EDUC 420 Contemporary Issues in Multilingual Learner Education 3 Credits**

Current educational, political, and social conditions that make learning English as a second language a matter of educational equity and social justice. Through a synthesis of the latest research and current educational trends, this course takes a critical look at the complexities of contemporary policies, school practices, and prevalent ideologies that both create and reinforce limited educational opportunities for MLs.

**EDUC 423 Curriculum and Materials Design for Multilingual Learners 3 Credits**

Design of curricula and materials to meet the needs of multilingual learners (MLs). This course will guide students through the process of creating, adapting, and differentiating materials used in everyday teaching, while also giving students tools to develop curricula for their districts and schools. Students will engage in design and adaptation at many levels from curricula and courses, to assessments, lesson plans, and tasks.

**EDUC 425 The Science of Reading 3 Credits**

This course will examine the empirical research and evidence-based practices behind the science of reading instructional framework. In this course, participants will examine: the structure of the English language, typical and atypical reading development, the pillars of reading and their interdependence. This course will also focus on scientifically-supported strategies to create motivating literacy environments for a diverse community of readers, including students with or at-risk for reading disabilities.

**EDUC 426 Linguistics and the Science of Phonics Instruction 3 Credits**

In this course, participants will gain an in-depth understanding of linguistics and phonics, including the importance of sociocultural environments as contexts that influence literacy skills. The connection between the phonological system, decoding, and word recognition will be discussed, and the best practices involved in explicit, systematic and cumulative phonological and phonics instruction will be examined and applied. The course will include an emphasis on instruction for at-risk students and students with reading disabilities, including causes of reading difficulties.

**EDUC 427 How Meaning is Made: Fluency, Vocabulary, & Comprehension 3 Credits**

This course will address how meaning is derived from spoken and written language. Participants will learn the processes of language acquisition, the etymological and morphological foundations of English, and the role semantics and syntax play in deriving meaning. Empirical contemporary theories of reading comprehension development will be emphasized. Participants will also explore the impact reading fluency, content knowledge, metacognitive skills, and sociocultural environments have on reading comprehension, as well as apply the evidenced-based practices shown to bolster these specific pillars.

**EDUC 428 Writing: Theories and Pedagogy 3 Credits**

This course will focus on developing participants' knowledge of the theories, evidence-based methods, and materials that can be used to teach writing as well as an understanding of typical developmental aspects of writing and the skills of successful independent writers. The course will also focus on the relationship between reading and writing and data-based decision-making to teach writing to all students, including students with disabilities and multilingual learners.

**EDUC 429 Data-based Decision Making: Assessment and Intervention for Students with Reading Disabilities 3 Credits**

This course will examine and critique systems of assessments used to identify students at-risk or with reading disabilities, determine areas of strengths and needed support, and evaluate intervention effectiveness in order to adapt and improve instruction. Emphasis will be placed on understanding dyslexia and other specific reading disabilities, as well as the use of Response to Intervention and Multi-Tiered System of Supports frameworks to engage in systematic data-based decision-making and instruction for students in need of supplemental intervention.

**EDUC 431 Multi-Tiered Systems of Social-Emotional Support 3 Credits**

Training in multi-tiered systems of support (MTSS) to address emotional, social, and well-being of all students. Topics include the rationale for MTSS; Tier 1 evidence-based programs; targeted interventions, at the Tier 2 and 3 levels, to address the continuum of students' behavioral needs; and an overview of the common mental health concerns that PreK-12 students experience. School personnel will learn how to integrate and apply the DSM-5 and IDEA to inform educational and mental health decisions within an MTSS framework.

**EDUC 434 Prevention and Management of Crisis 1 Credit**

This course is designed to introduce school personnel to crisis response in school settings, focusing on best prevention, intervention, and follow-up practices. School personnel will learn prevention strategies, discuss the considerations in building a crisis response team and learn crisis response methods, including methods of individual and group crisis counseling. Specific crises considered will include suicide, death of a teacher, student, parent, or community member, and school violence.

**EDUC 435 Implementation for Equity: Leading Student-Centered Schools 1 Credit**

This module is designed to develop school personnel's knowledge about how to organize and implement initiatives that support a student's social, emotional, and behavioral wellness. With an emphasis on implementation and operation, school personnel will focus on inter-system collaboration among community partners to address student social, emotional, and behavioral needs through the implementation of equitable SEL programs and practices. Finally, school personnel will discuss the protections associated with confidentiality.

**EDUC 436 Implementation for Equity: Social Emotional Learning in Action 1 Credit**

This module is focused on application of social-emotional theories and practices to create equitable learning environments. This course will engage school personnel in identifying one or more inequities within the school context and developing a culturally responsive plan to remediate these inequities. Considering organizational readiness, school personnel will focus on inter-system collaboration among family, school, and community partners to assess and address student social, emotional, and behavioral needs, as well as learn skills to engage youth in decision-making processes.

**EDUC 437 Identity and Cultural Foundations of Latin American People in the US 3 Credits**

This course offers a survey of the socio-cultural and historical underpinnings of Latin American identity, with a focus on Latin American people in the United States. The course reviews foundation/contextual commonalities in the formation of one "Latin American identity" while emphasizing racial, ethnic, and other heterogeneity within the Latin American community. Some of the topics addressed in the course include pre-colonial foundations, colorism, acculturation, and contemporary issues related to Latin Americans in the U.S.

**EDUC 438 Community Based & Educational Interventions for the Mental Health of Latin American People in the US 3 Credits**

This course offers an introduction to social determinants of mental and physical health of Latin American people in the US. The course specifically addresses the following social determinants: educational equity, mental health access, health care access, economic stability, neighborhood health, and social and community processes. The course has a participatory component, through which students partner with a community group, organization (mental health agency or healthcare), or school to design a structural intervention that addresses social determinants impacting that community. The.

**EDUC 451 Cognition and Emotion 3 Credits**

Basic principles and contemporary theories of cognitive psychology and affect will be covered. Experimental research relevant to contemporary theories of cognitive psychology and affect and the application of these theories in educational settings will be reviewed.

**EDUC 456 Trauma and Resilience in Schools 3 Credits**

This course is designed to provide educators and mental health trainees with a comprehensive exploration of psychological trauma and resilience; including the history and current theories in the field; the nature of trauma; how trauma and loss affects individuals and systems; grief reactions; learning and behavior and traumatic stress; and the development of trauma-responsive schools. Cultural-sensitivity, survivor-centeredness, and social justice efforts are emphasized within a trauma-informed care approach to prevention and practice.

**EDUC 461 Single-Subject Research Design 3 Credits**

Experimental designs for use with small N's. Topics include design theory and application, experimental validity (internal, external, statistical conclusions and construct validity) and an overview of data analysis procedures.

**EDUC 471 Diversity and Multicultural Perspectives 3 Credits**

Examination of the influence of culture, gender, and disabilities on behavior and attitudes. Historical and current perspectives on race, culture, gender, sexual orientation, gender identity diversity, and minority group issues in education and psychology. Lecture/small group discussion. This course is restricted to graduate students in the College of Education.

**EDUC 473 Social Basis of Human Behavior 3 Credits**

Development of human behavior from a social psychological perspective. Emphasis placed on the impact of society upon school-age children and adolescents.

**EDUC 474 Behavioral Neuroscience 3 Credits**

Humans are biological creatures, and our behaviors and thoughts are influenced and constrained by our physiology. This course will describe how the function of the working brain contributes to our thoughts, feelings, and actions. We will also discuss the implications of a brain-based approach to issues of free will, responsibility, and identity.

**EDUC 475 Clinical Psychopharmacology 3 Credits**

This course will examine the principle concepts in pharmacology such as pharmacokinetics and pharmacodynamics, different neurotransmitter systems and our current understanding of their relationship to behavior, as well as pharmacological treatment of various psychological or psychiatric disorders. Additionally, we will explore the ethical issues and concerns associated with taking a bioreductive view of psychology, as well as issues relating to advance in new drug development.

**EDUC 482 Practicum in University Teaching: Education 1-4 Credits**

Mentored and guided co-teaching focused on the design, organization, pedagogy and assessment of university courses in Education. Students in this course will work with a faculty member to apply best practices in university teaching with feedback while co-teaching students in a course in the College of Education. Students taking the course must meet the college standards for participation and be approved by the program director and department chair. May be repeated for credit.

**Repeat Status:** Course may be repeated.

**EDUC 486 Doctoral Qualifying Research Project 1-3 Credits**

Design and implement research project under faculty supervision to meet requirements for doctoral programs.

**Repeat Status:** Course may be repeated.

**EDUC 490 Thesis 1-6 Credits****EDUC 491 Advanced Seminars: (with subtitle) 1-6 Credits**

Intensive study and discussion of a specialized area. Title will vary.

**Repeat Status:** Course may be repeated.

**EDUC 493 Internship in: (with subtitle) 1-6 Credits**

Opportunity for students to apply theory to practice in a variety of educational settings. Students will be supervised in the field and participate in seminars dedicated to addressing specific concerns and issues encountered during their experience. Consent of program director required.

**EDUC 494 Field Work in: (with subtitle) 3 Credits**

Identification of significant problems in an educational environment, review of the literature, and development of appropriate research plans.

**EDUC 495 Independent Study in: (with subtitle) 1-6 Credits**

Individual or small group study in the field of specialization. Approved and supervised by the major adviser.

**Repeat Status:** Course may be repeated.

**EDUC 496 Doctoral Research Seminar 3 Credits**

For doctoral students. Research design and application to various kinds of educational problems; data collection and analysis. Criticism and evaluation of student proposals.

**Repeat Status:** Course may be repeated.

**EDUC 499 Dissertation 1-15 Credits**