

# COURSES FOR EDUCATIONAL STUDIES IN PSYCHOLOGY, RESEARCH METHODOLOGY AND COUNSELING

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## Educational Psychology Courses

### **BEP110 Intro Learning Strateg Skills**

Hours 3

Provides students with a theoretical and practical understanding of the importance and use of specific learning strategies. This course will also engage students in reflective decision making and critical evaluation of their learning process.

### **BEP220 Brain, Learning, and Cognition**

Hours 3

The purpose of this course is to provide students with a comprehensive overview of the behavioral and neuroscientific aspects of learning, memory, and cognition.

Prerequisite(s): PY 101

### **BEP305 Educational Psychology**

Hours 3

Covers the psychological principles basic to an understanding of the learner, the learning process, and the learning situation.

Prerequisite(s): PY 101 or HD 101 or PY 105 or HD 102

### **BEP310 Lab-based Research Practicum**

Hours 1-2

The goal of this course is to provide students with hands-on experiences in conducting educational neuroscience research.

Prerequisite(s): PY 101 or HD 101 Or PY 105

### **BEP330 Computational Methods in Cognitive Neuroscience**

C

Hours 3

In this course, students will develop proficiency in the analytical skills needed to understand and manipulate neuroimaging data. Much of the focus will be on learning the fundamentals of MATLAB programming. Computing proficiency is required for a passing grade in this course.

Prerequisite(s): BER 345 or PY 211 or ST 260 or BSC 380 or CJ 381

Computer Science

### **BEP346 Experimental Methods in Educational Neuroscience**

Hours 3

This course provides a comprehensive overview of experimental design and methodologies within cognitive psychology and neuroscience, as well as exploring interdisciplinary methods within educational neuroscience. Students will learn the basics of experimental design, how to read research articles, communicate research to others, construct literature reviews and generate proposals.

### **BEP360 Social Psychol Foundtns Educ**

Hours 3

An examination of the social, psychological, philosophical, and historical foundations of education in a modern democratic society. Critical attention is paid to contrasting theories of human nature, the learner and the learning process that, when combined with judgments about the purpose and conduct of life, have shaped pedagogy.

Prerequisite(s): PY 101 or HD 101 or PY 105 or HD 102

### **BEP400 Topics in Ed Neuro: Numerical Cognition**

W

Hours 3

This course will provide a comprehensive overview of the different areas of research in numerical cognition research and how they have shaped various approaches to learning and teaching mathematics. The focus of the course is to provide students with an understanding of the neural, cognitive, and cultural factors that affect numerical cognition and its implications for k-12 math and science teaching and learning. Writing proficiency is required for a passing grade in this course. A student who does not write with the skill normally required of an upper-division student will not earn a passing grade, no matter how well the student performs in other areas of the course. The written assignments of this course require coherent, logical, and carefully edited prose that will demonstrate students' analysis and synthesis skills.

Prerequisite(s): BEP 220

Writing

### **BEP420 Topics in Educational Neuroscience: Scientific Thinking and Reasoning**

W

Hours 3

In this special topics course, students will develop a deeper understanding of how educational neuroscience research can inform science instruction and learning. Writing proficiency is required for a passing grade. A student who does not write with the skill normally required for an upper-division student will not earn a passing grade, no matter how well the student performs in other areas of the course. The written assignments of this course requires coherent, logical and carefully edited prose that will demonstrate students' analysis and synthesis skills.

Prerequisite(s): BEP 220

Writing

**BEP450 Topics in Ed Neuro: Moral Psychology & Ethical Development**  
W

Hours 3

What is morality? Would we all make the same decision in a moral dilemma? This course aims to help students answer these questions by providing an overview of the psychology of morality with a focus on the processes leading to moral action. Writing proficiency is required for a passing grade in this course. A student who does not write with the skills normally required of an upper-division student will not earn a passing grade, no matter how well the student performs in other areas of the course. The written assignments of this course requires coherent, logical and carefully edited prose that will demonstrate students' analysis and synthesis skills.

Prerequisite(s): BEP 220

Writing

**BEP460 Topics in Educational Neuroscience: Language, Reading and the Brain**

SP, W

Hours 3

This course will focus on the varied neuroimaging methodologies used by our Educational Neuroscience faculty. Faculty will present a different methodology in each iteration of the course. These methodologies include EEG, NIRS, Eye-tracking, and MRI. Please contact the department for information on semester-specific course offerings. Writing proficiency is required for a passing grade in this course. A student who does not write with the skill normally required for an upper-division student will not earn a passing grade, no matter how well the student performs in other areas of the course. The written assignments of this course require coherent, logical and carefully edited prose that will demonstrate students' analysis and synthesis skills.

Prerequisite(s): BEP 220

Special Topics Course, Writing

**BEP480 Neuroimaging**

C

Hours 4

This course will provide students with an overview of the methods, experimental design, and analytical skills used in magnetic resonance imaging (MRI) and functional magnetic resonance imaging (fMRI) data, as well as how these methods are used in educational neuroscience. Computing proficiency is required for a passing grade in this course.

Prerequisite(s): BEP 220

Computer Science

**BEP490 Electrophysiology**

C

Hours 4

This course provides an overview of electrophysiological methods used in the field of educational neuroscience to conduct research on learning and cognition. Students will also gain experience in the collection, analysis, and interpretation of electrophysiology data. Computing proficiency is required for a passing grade in this course.

Prerequisite(s): BEP 220

Computer Science

## Courses for Educational Research

**BER340 Introduction to Qualitative Research**

Hours 3

This course is an introduction to qualitative research that centers on discussions related to the application of qualitative research methods and an understanding of the issues involved in qualitative research ethics, design, analysis and writing. The course is organized into five major emphases: An introduction to qualitative research; the researcher as apart of qualitative research; role of theory in qualitative research; conducting qualitative research; and ethical implications.

**BER345 Educational Statistics**

Hours 3

Statistical methods in education; graphs, charts, frequency distributions, central tendencies, dispersion, correlation, sampling errors, estimation, and hypothesis testing.

**BER346 Experimental Methods in Educational Neuroscience**

Hours 3

The purpose of this course is to provide a comprehensive overview of experimental design and methodologies within cognitive psychology and neuroscience, as well as interdisciplinary methods within educational neuroscience. Students will learn the basics of experimental design, how to read research articles, communicate research to others, construct literature reviews and generate proposals.

Prerequisite(s): BER 345 or PY 211 or ST 260 or BSC 380 or CJ 381

**BER450 Assess Of Classrm Learnng**

Hours 3

Survey of teacher-made and standardized instruments for understanding students' achievement and evaluating teaching. Field practicum in the schools is required.

Prerequisite(s): Admission to Teacher Education Program