

## PROPOSAL

### **Quantitative Methods Area Requirements**

The Quantitative Area of the Department of Educational Psychology is divided into two subareas: (1) Educational Statistics and Research Methodology; and (2) Educational Measurement. Below are listed the requirements in each of these subareas for students seeking the Master's and PhD degrees, respectively.

#### **I. Master's Degree Requirements**

##### A. Educational Statistics and Research Methodology

1. Required Courses:

- EP 709 (First-year research seminar, Semester I)
- EP 710 (First-year research seminar, Semester II)
- EP 712 (Educational Psychology Diversity Seminar)
- EP 760 (Statistical Methods Applied to Education I)
- EP 761 (Statistical Methods Applied to Education II)
- EP 762 (Introduction to the Design of Educational Experiments)
- EP 763 Regression Models in Education

2. Three additional courses in the quantitative area (to be determined in consultation with advisor).
3. Eight additional elective credits (to be determined in consultation with advisor).
4. Master's thesis

##### B. Educational Measurement

1. Required Courses:

- EP 709 (First-year research seminar, Semester I)
- EP 710 (First-year research seminar, Semester II)
- EP 712 (Educational Psychology Diversity Seminar)
- EP 771 (Test Construction)
- EP 760 (Statistical Methods Applied to Education I)
- EP 761 (Statistical Methods Applied to Education II)

2. Three additional courses in the quantitative area (to be determined in consultation with advisor).
3. Eight additional elective credits (to be determined in consultation with advisor).
4. Master's thesis

### Definitions of "Satisfactory Progress" for Master's Students

1. Cumulative grade-point average of AB or better
2. No Incompletes extending beyond one academic semester
3. Approval of thesis proposal within 2 years
4. Completion of thesis within 3 years

## II. PhD Degree Requirements

### A. Educational Statistics and Research Methodology

1. Required Courses:
  - EP 709 (First-year research seminar, Semester I)
  - EP 710 (First-year research seminar, Semester II)
  - EP 712 (Educational Psychology Diversity Seminar)
  - EP 760 (Statistical Methods Applied to Education I)
  - EP 761 (Statistical Methods Applied to Education II)
  - EP 762 (Introduction to the Design of Educational Experiments)
  - EP 763 (Regression Models in Education)
  - EP 771 (Test Construction)
  - EP 960 (Structural Equation Modeling)
  - EP 964 (Hierarchical Linear Modeling)
  - EP 963 (Design and Analysis of Quasi-Experiments)
  - Statistics 309, 311,313, 609, or 709 (Introduction to Mathematical Statistics I)
  - Statistics 310, 312,314, 610, or 710 (Introduction to Mathematical Statistics II)
2. Doctoral Minor (9 credits of appropriate breadth)
3. Ten elective credits (to be determined in consultation with advisor).

#### Recommended and Elective Courses

- EP 871 (Test Theory II: Item Response Theory)
  - EP 773 (Factor Analysis, Multidimensional Scaling, and Cluster Analysis)
  - EP 965 (Bayesian Methods in Educational Research)
  - EP 971 (Advanced Topics in Quantitative Methods)
  - Other statistics courses, including those outside of the Department and special topics courses within the Department (e.g., longitudinal data analysis, statistical computation, missing data analysis)
  - Other courses from the Learning Sciences, Human Development, and School Psychology areas that fit into the student's program of study
4. Preliminary examination
  5. Doctoral dissertation proposal hearing and final defense

## B. Educational Measurement

### 1. Required Courses Within the Department of Educational Psychology

EP 709 (First-year research seminar, Semester I)  
EP 710 (First-year research seminar, Semester II)  
EP 712 (Educational Psychology Diversity Seminar)  
EP 760 (Statistical Methods Applied to Education I)  
EP 761 (Statistical Methods Applied to Education II)  
EP 762 (Introduction to the Design of Educational Experiments)  
EP 763 (Regression Models in Education)  
EP 771 (Test Construction)  
EP 773 (Factor Analysis, Multidimensional Scaling, and Cluster Analysis)

EP 871 (Test Theory II: Item Response Theory)  
EP 960 (Structural Equation Modeling)  
Statistics 309, 311, 313, 609 or 709 (Introduction to Mathematical Statistics I)\*  
Statistics 310, 312, 314, 610 or 710 (Introduction to Mathematical Statistics II)\*

### 2. Doctoral Minor (9 credits of appropriate breadth)

### 3. Ten elective credits (to be determined in consultation with advisor).

Recommended and Elective Courses (to be selected in consultation with advisor)

EP 963 (Design and Analysis of Quasi-Experiments)  
EP 964 (Hierarchical Linear Modeling)  
EP 965 (Bayesian Methods in Educational Research)  
EP 971 (Advanced Topics in Quantitative Methods)

Other measurement/assessment/evaluation and statistics courses, including those outside of the Department and those to be developed in the Department  
Other courses from the Learning Sciences, Human Development, and School Psychology areas that fit into the student's program of study

### 4. Preliminary examination

### 5. Doctoral dissertation proposal hearing and final defense

## Definitions of "Satisfactory Progress" for Doctoral Students

1. Cumulative grade-point average of AB or better
2. No Incompletes extending beyond one academic semester
3. Good academic standing in regard to Graduate School policy
4. Adherence to progress timeline:

### For students who do not have a prior Master's degree approved by the Area:

- a. completion of first-year project within one year, and defense of a Master's thesis within 3 years.
- b. completion of coursework within 3 years
- c. successful completion of preliminary examination within 4 years
- d. approval of dissertation proposal within 4 years
- e. completion of dissertation within 5 years

### For students with a Master's degree from outside the Department and approved by the Area:

- a. completion of first-year project within one year, and successful presentation of Master's substitution within 3 years.
- b. completion of coursework within 3 years
- c. successful completion of preliminary examination within 4 years
- d. approval of dissertation proposal within 4 years
- e. completion of dissertation within 5 years