

# EDUCATIONAL PSYCHOLOGY, PHD: EDUCATIONAL STATISTICS AND MEASUREMENT

This program is designed to provide you with the knowledge and experience necessary to research existing analytical techniques, as well as to develop and apply new methodologies in educational measurement and statistics. After completing your doctoral studies, you'll be ready to independently conduct quantitative data analyses; construct measurement instruments; translate sophisticated research findings; replicate research studies; contribute to the theory of research methodology; and teach basic courses in measurement, statistics, and research design.

## Why Choose Our PhD Program?

You'll be taught and mentored by faculty who specialize in this field, and you'll learn about:

- Procedures to develop and/or apply psychometric methods including classical test theory, generalizability theory, item response theory, and computer adaptive testing.
- Procedures to develop and/or apply quantitative methods and statistical models, including traditional general linear models (regression, ANOVA, and their extensions) and more modern methods such as multivariate analyses, categorical data analysis, and multilevel data modeling.

## Doctoral Minor

Doctoral students in other areas can also add a minor in Educational Statistics and Measurement. If you take 9 credits of courses in the ESM area, in addition to any courses that are required by your degree program, then a minor in ESM will be noted on your transcript. A minor in ESM will strengthen your quantitative research skills, which are valued by many employers.

## Educational Psychology PhD

The goal of the Doctor of Philosophy in Educational Psychology is to prepare psychologists, researchers and educational professionals to effectively work on the unique challenges of promoting education, learning, and mental health in urban environments. The four areas of emphasis in the doctoral program are:

- Counseling Psychology
- Cognitive and Developmental Sciences
- Educational Statistics and Measurement
- School Psychology

See the Educational Psychology Website (<https://uwm.edu/education/academics/educational-psychology-department/>) for more information on these areas.

The Counseling Psychology and School Psychology specializations at the master's and doctoral level are accredited by the American Psychological Association (APA).

Office of Program Consultation and Accreditation

American Psychological Association  
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E-mail: [apaaccred@apa.org](mailto:apaaccred@apa.org)  
Website: American Psychological Association Website (<https://accreditation.apa.org/>)

## Admission Requirements

### Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

### Admission

To be considered for admission to the program applicants must complete the Graduate School online application, and satisfy all UWM Graduate School admission requirements in addition to the following program requirements:

- Optional: Submission of scores on the General Test portion of the Graduate Record Examination (<http://uwm.edu/graduateschool/admission/#gre>); test taken within last five years. GRE scores are not required for any program in educational psychology but may be submitted as supplemental material.
- Undergraduate GPA of at least 3.0; graduate GPA of at least 3.5 required.
- A letter outlining the applicant's academic and professional background, declaration of Area of Concentration (Counseling Psychology, Cognitive and Developmental Sciences, Educational Statistics and Measurement, or School Psychology) as well as specific research interests and goals for the PhD program.
- Three letters of recommendation from individuals familiar with the applicant's intellectual achievement and potential.
- Applicants to the Cognitive and Developmental Sciences, School Psychology, and Counseling Psychology concentrations must submit at least one sample of their academic writing. You may add additional materials that highlight your professional and/or academic skills.
- Applicants to the Educational Statistics and Measurement concentration must submit at least one sample of quantitative research/statistical analysis. You may add additional materials that highlight your professional and/or academic skills.
- For the concentrations in Counseling Psychology and School Psychology: a resume or curriculum vitae.
- Completion of the reason statement on the application.

## Credits and Courses

### Core Educational Psychology Requirements

All doctoral students are required to complete 27 core credits in the areas of Psychological Foundations and Research Methods. In many cases, students entering with a Master's degree will have completed some of these courses. Courses taken during Master's preparation may be counted in meeting the core requirements. Elective credits are taken in consultation with the major professor.

**Psychological Foundations Core:** Students must take 12 credits minimum of psychological foundations (social, cognitive, affective, or biological basis of behavior).

**Research Methods Core:** 15 credits minimum.

All doctoral students must show documentation that they have acquired research skills needed for dissertation work. To fulfill this requirement students must successfully complete at least 15 credits of coursework in the area of research methods. All students must complete ED PSY 624 and ED PSY 724. Students must fulfill the remaining requirements by choosing from courses offered at the 700-level or above. Students should consult the specific requirements for their area of specialization for additional requirements, as the requirements for each area of specialization may exceed those specified here.

**Urban Foundations:** EDUC 701, Critical Issues in Urban Education, is recommended for the Cognitive and Developmental Sciences and Educational Statistics and Measurement specializations.

Code	Title	Credits
<b>Psychological Foundations Core</b>		
ED PSY 631	Cognition: Learning, Problem Solving and Thinking	3
or ED PSY 831	Cognition: Theory and Research	
ED PSY 640	Human Development: Theory and Research	3
<b>Electives</b>		
Select two of the following:		6
ED PSY 734	Contextual Determinants of Motivation	
ED PSY 735	Social Cognition in Educational Psychology	
ED PSY 741	Cognitive Development	
ED PSY 742	Personality Theories and the Educational Process	
ED PSY 743	Human Development: Study of Infancy and Early Childhood	
ED PSY 746	Human Development: Study of the Adolescent	
ED PSY 747	Human Development: Study of the Adult	
ED PSY 748	Oral Language, Cognition, and Literacy	
ED PSY 814	Cognition and Emotion: The Affective Components of Human Thought	
ED PSY 831	Cognition: Theory and Research	
ED PSY 833	Social Psychology of Group Differences: Race and Ethnicity	
ED PSY 834	The Psychology of Achievement Motivation	
ED PSY 844	The Multicultural Family	
ED PSY 845	Immigrant Child in Developmental Perspective	
<b>Research Core</b>		
ED PSY 624	Statistical Methods for Professionals and Practitioners I	3
ED PSY 724	Statistical Methods for Professionals and Practitioners II	4
Select from the following to meet the 15-credit minimum:		8

ED PSY 720	Techniques of Educational and Psychological Measurement
ED PSY 728	Techniques of Educational Research
ED PSY 820	Multiple Regression
ED PSY 821	Psychometric Theory and Scale Development
ED PSY 822	Item Response Theory
ED PSY 823	Structural Equation Modeling
ED PSY 824	Advanced Experimental Design and Analysis
ED PSY 825	Multivariate Methods
ED PSY 826	Analysis of Cross-Classified Categorical Data
ED PSY 827	Survey Research Methods
ED PSY 829	Instrument Development
ED PSY 922	Seminar in Measurement and Evaluation:
ED PSY 929	Seminar in Statistics and Research Design
AD LDSP 729	Qualitative Research and Field Studies in Education Settings

**Total Credits** 27

## Core Concentration Requirements

All students must complete core courses in their area of concentration. Minimum credit requirements vary with the area of concentration due to accreditation and certification requirements.

## Other Requirements

In addition to the requirements listed below, please refer to the program handbook for each concentration.

## Educational Statistics and Measurement Concentration

Code	Title	Credits
<b>Select 8 of the following:</b>		
ED PSY 720	Techniques of Educational and Psychological Measurement	
ED PSY 728	Techniques of Educational Research	
ED PSY 820	Multiple Regression	
ED PSY 821	Psychometric Theory and Scale Development	
ED PSY 822	Item Response Theory	
ED PSY 823	Structural Equation Modeling	
ED PSY 824	Advanced Experimental Design and Analysis	
ED PSY 825	Multivariate Methods	
ED PSY 826	Analysis of Cross-Classified Categorical Data	
ED PSY 827	Survey Research Methods	
ED PSY 829	Instrument Development	
ED PSY 832	Theory of Hierarchical Linear Modeling	
ED PSY 922	Seminar in Measurement and Evaluation:	

ED PSY 929

Seminar in Statistics and Research  
Design**Total Credits****24**

Other relevant elective courses may be approved by the advisor.

## Additional Requirements

### Advising and the Major Professor

Upon admission to the doctoral program in Educational Psychology, students are assigned an advisor in their area of emphasis (e.g., Counseling Psychology, Cognitive and Developmental Sciences, Educational Statistics and Measurement, or School Psychology). This person is available to discuss course selection and provide general advice about the program. Selection of an advisor is by mutual consent between the student and faculty member; changes in advisor will follow Graduate School guidelines. Requests for a change in advisor can occur in consultation with the advisor, program chair, and/or graduate representative.

### Residence

The student must meet minimum Graduate School residence requirements (<https://uwm.edu/graduateschool/students/academic-policies-and-procedures/doctoral-resources/doctoral-requirements/>) of one continuous academic year of full-time graduate studies at UWM. This can be satisfied by completing at least 8 graduate credits in each of two consecutive semesters, or 6 or more graduate credits in each of three consecutive semesters, exclusive of summer sessions. Residence credit cannot be earned at the master's level.

### Practicum

Students in the Counseling Psychology and School Psychology concentrations are required to complete practicum requirements to become licensed.

### Internship

Following Practicum, students in the Counseling Psychology and School Psychology concentrations are required to complete a year-long internship in order to be licensed.

### Minor

A minor is optional. Students should consult with their advisor.

### Doctoral Preliminary Examination

The Doctoral Preliminary Examination is taken at the end of a student's coursework. A description of the Preliminary Examination is provided in the doctoral handbook corresponding to the student's specialization area within Educational Psychology.

The Preliminary Examination consists of a written component and, in some specializations, an oral component. The purpose of the Preliminary Examination is to determine whether the student demonstrates understanding of coursework and related bodies of knowledge and is qualified to proceed with dissertation planning. A minimum of three faculty members in the specialization area shall participate on a student's Preliminary Examination.

### Proposal Hearing

A doctoral student qualifies as a "doctoral candidate" upon completion of the doctoral Student Academic Plan, successful completion of the Doctoral Preliminary Examination for the PhD degree, and successfully

passing a dissertation proposal hearing. The hearing is open and the date, time and location must be announced by the Doctoral Coordinator. Each member of the committee must sign the doctoral dissertation proposal hearing form, and indicate approval or disapproval. A simple majority of all committee members is required. No absentee ballots are acceptable.

### Dissertation Defense

The candidate must write a dissertation that demonstrates the ability to pursue independent research. The candidate must pass an oral exam in defense of the dissertation.

### Exit Requirements

Contingent upon satisfactory completion of program requirements, passage of the preliminary qualifying examination, and successful oral defense of the dissertation, the Chair of the Department of Educational Psychology will give final approval of the PhD in Educational Psychology.

### Time Limit

It is expected that most students will complete all degree requirements within six years of initial enrollment in the doctoral program. All requirements MUST be completed within ten years from the date of initial enrollment.

## Educational Psychology PhD: Educational Statistics and Measurement Learning Outcomes

Students graduating from the Educational Statistics and Measurement PhD program will be able to:

- Explain how various statistical models commonly used in educational research are related to and differ from each other.
- Explain how various psychometric analyses commonly used in educational research are related to and differ from each other.
- Choose the appropriate quantitative method for a given educational research data analysis.
- Analyze data and obtain appropriate results using statistical software.
- Correctly perform and interpret the results of psychometric data analyses.
- Correctly perform and interpret the results of quantitative data analyses commonly used in educational research.
- Evaluate methodological research produced by others.
- Develop methodological research that contributes to the literature in the field.
- Conduct methodological research that contributes to knowledge in the field.