URBAN EDUCATION, PHD: MATHEMATICS EDUCATION

Specialization Overview

The specialization in Mathematics Education integrates mathematical knowledge for teaching within the broader field of urban education and prepares individuals to address critical issues across varied educational settings and contexts through research and scholarship in mathematics education.

For course descriptions in this area, visit the Curriculum and Instruction page (https://catalog.uwm.edu/courses/currins/) of this catalog.

Degree Overview

The School of Education offers an interdepartmental program of study leading to the PhD. Students must choose a specialization in either Curriculum and Instruction, Exceptional Education, or Mathematics Education.

The program is designed to permit students to integrate their particular curricular areas of interest and specialization with a broader field of education, including urban education. Each specialization is departmentally focused and students must satisfy the admissions and curriculum requirements indicated for their particular specialization. Recognition of the specialization is acknowledged by official designation on the student's transcript.

A separate PhD with specialization in Counseling Psychology, Learning and Development, Research Methodology, and School Psychology is offered through the Department of Educational Psychology and Leadership.

All graduates should have a broad understanding of the issues, problems and trends related to education, including urban education, and the application of these to their major.

The program requires each participant to develop research skills ranging from logic in inquiry to development of specific methodological skills in qualitative and quantitative methods. The PhD is a research degree and not only a professional preparation degree. Therefore research is an integral part of the program. Mastery of these skills is demonstrated through coursework, research projects and the dissertation. Graduates apply their skills, in institutions of higher education, public or private school settings, federal, state, or local governmental agencies, community organizations, and the private sector.

Cooperating Departments

- Educational Policy and Community Studies
- Educational Psychology and Leadership
- Teaching and Learning

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

An applicant must meet Graduate School requirements plus the following program requirements to be considered for admission. Applicants must also complete the reason statement in the application.

Graduate Record Examination

GRE scores are not required for admission to program.

Grade Point Average

Applicants must have an undergraduate GPA of 2.75.

Check with specializations that might have additional requirements.

Writing Sample

Applicants must submit a writing sample completed within the last five years. The writing sample must be single authored, at least 1500 words, and must be selected from **one** of the following options:

1. Master's Thesis
2. Undergraduate Senior Thesis
3. Technical Report
4. Term Paper
5. Publication
6. Written Description of a Project
7. Action Research Project
8. Writing sample or written response showing evidence of analytical and argumentative writing and reasoning. The response should address the following: How would you conceptualize and analyze issues in urban education? The response to this question must show evidence of appropriate references to a knowledge base.

The writing sample must be submitted with the application.

Reasons Statement

A Reasons Statement is used to determine the appropriateness of your educational and professional goals and serves as an example of your ability to express yourself in writing. In the statement:

- Explain your reasons for pursuing graduate study.
- Describe specific interests and your background in the field.
- List any relevant skills or training you have acquired.
- List relevant academic awards or honors you have received.

Curriculum Vitae/Resume

All UEDP applicants are required to submit a current Curriculum Vitae/ Resume.

Recommendations

The program requires 3 letters of recommendation. These letters must be submitted through the application's electronic recommendation feature by the recommenders themselves. Letters uploaded or sent by the applicant will not be accepted. If possible, please provide your recommenders with a summary of your application materials. Feel free to encourage your recommenders to provide illustrations linking your experiences and abilities with the aims of the doctoral specialization.

Application

Applicants are required to articulate their urban and research interests and goals in application materials. An intended concentration within the PhD must be specified at time of application.

1. Applicants who fail to satisfy these admission requirements will not be recommended for admission. However, satisfying these minima does not guarantee admission.
2. Applicants who are not recommended for admission will be provided an opportunity to request a reconsideration.

Individual specializations may expect prior coursework in that area. Applicants may contact the Director for specific information. Openings in the program are limited.

Students should apply by December 1st of the year prior to entry, or earlier, if they plan to apply for University-wide fellowships. Applications completed after the priority deadline will be reviewed on a rolling basis up until April 1st for Fall admission of that calendar year.

Application materials MUST be submitted by April 1st in order to be admitted for the fall semester.

Credits and Courses

Minimum degree requirement is 54 credits beyond the bachelor's degree (although students ordinarily take more than 54), at least 27 of which must be earned in residence at UWM (i.e., on the UWM campus).

A minimum grade of B or better is required for all courses counting toward the Urban Education doctoral degree. Students earning a B- or lower must consult with their advisor to fulfill the requirement within one semester.

In consultation with the major professor, the student designs a program of studies that enables the student to gain the knowledge and skills appropriate to the student's goals.

The program of studies includes the following:

The Doctoral Seminars

All doctoral students must take three 3-credit seminar courses devoted to content involving education in an urban environment.

Code	Title	Credits
EDUC 701	Critical Issues in Urban Education	3
EDUC 801	Seminar in Urban Education	3
EDUC 901	Advanced Seminar in Urban Education	3

Research Requirement

Department specialization requirements may exceed those specified here.

Code	Title	Credits
Choose one:		3-4
ED PSY 724	Statistical Methods for Professionals and Practitioners II (prerequisite is ED PSY 624)	
ED PSY 728	Techniques of Educational Research (prerequisite is ED PSY 624)	
CURRINS/AD LDSP 729	Qualitative Research and Field Studies in Educational Settings	3
Additional advanced-level (600 or above) coursework from either a qualitative track or quantitative track		6
Approved research design course		3
Total Credits		**15-16**

All students must demonstrate knowledge in this area by completing the specialization equivalent to the preliminary exam and successfully defending a dissertation.

Designated Specialization

Students indicate a specific area of specialization by applying for one of the transcript-designated specializations in either Adult, Continuing, and Higher Education Leadership, Curriculum and Instruction, Exceptional Education, Mathematics Education, Multicultural Studies, or Social Foundations of Education. Students may be required to meet the specific admissions and program requirements for their intended specialization in addition to meeting the PhD admissions and program requirements. (Please see the accompanying explanation and requirements for each specialization.)

Residency

Residence requirements cannot be met at the master's level, and must be fulfilled before you can achieve dissertator status. There are two types of doctoral residency that must be met:

Academic Year Requirement

You must complete 8 to 12 graduate credits in each of two consecutive semesters, or 6 or more graduate credits in each of three consecutive semesters, including summer sessions. This requirement is intended to provide immersion in the chosen discipline and foster participation in the community of scholars.

50% Requirement

At least 50% of the graduate credits required for your PhD program must be completed at UWM in doctoral status.

Mathematics Specialization

After admission to the Urban Education Doctoral Program (UEDP), the student must submit a Plan of Studies in Mathematics Education developed in conjunction with the student's Major Professor for approval by the Director of the UEDP.

The student must meet all of the program requirements of the Urban Education Doctoral Program, including 9 credits of doctoral seminars and 12-13 credits of research methods.

The specialization in Mathematics Education consists of 9 required credits in advanced mathematics education and a minimum of 23 elective credits in mathematics education, related coursework, dissertator credits, or a minor. Relevant master's degree and other prior graduate coursework may be used to fulfill program requirements. At least 12 credits in mathematics education must be taken after admission to the program.

Code	Title	Credits
Required		
CURRINS 720	Curriculum and Standards for School Mathematics	3
CURRINS 861	Seminar in Mathematics Urban Education	3
CURRINS 864	Integrating Mathematics Education Research into Curriculum and Instruction	3
Recommended Electives		
CURRINS 624	Instructional Trajectories for Fraction Concepts and Operations	3

CURRINS 625	Principles and Practices of Teaching Geometry and Geometric Thinking	3
CURRINS 626	Principles and Practices of Teaching Algebraic Reasoning	3
CURRINS 730	Mathematics in Elementary Education	3
CURRINS 731	Mathematics in the Secondary School	3
CURRINS 761	Mathematics Instructional Leadership	3
CURRINS 830	Seminar in Elementary School Mathematics Education	3
CURRINS 865	Mathematics Program Design and Development	3
Total Credits		**33**

Additional Requirements

Major Professor

Upon admission to the doctoral program, the student is assigned an initial advisor from their intended specialization. This person is available to discuss initial course selection and provide general advice about the program and specialization. After beginning the program and before filing a Plan of Studies, the student will seek a permanent major professor from their specialization who is eligible to serve in such a capacity. This permanent advisor may be the initial advisor if the student desires. The major professor is also chair of the student's dissertation committee.

Selection of the major professor is by mutual consent between the student and the faculty member. The student must notify the UEDP in writing when the major professor has been selected.

Foreign Language Requirement

There is no foreign language requirement. However, individual students may be required to demonstrate proficiency in a foreign language if such proficiency is determined to be necessary by a student's committee.

Doctoral Preliminary Examination

The student must pass a doctoral preliminary examination to qualify for formal admission to candidacy for the degree. The examination covers the area of specialization, urban education, the minor (if applicable), and research methods.

Dissertation

The candidate must present a dissertation reporting the results of an original research study appropriate to the student's program. Prior to beginning the research, the candidate must present an acceptable dissertation proposal and defend it at an oral hearing.

Dissertation Defense

The candidate must, as the final step toward the degree, pass an oral examination in defense of the dissertation.

Time Limit

Students who do not complete all degree requirements within seven years from the date of admission to the doctoral program will be recommended for dismissal to the Graduate School.

Other Requirements

This is only a summary of the doctoral program requirements. A complete list of requirements is available from the Office of Doctoral Studies. Doctoral Committees may specify course requirements which exceed the minima described here.

For additional information on the PhD, see the Graduate School Doctoral Requirements (http://wwwdev.uwm.edu/graduateschool/doctoral-requirements/).

Exit Requirements

Contingent upon satisfactory completion of program requirements, the preliminary qualifying examination, dissertation proposal hearing, and the successful oral defense of the dissertation, the Urban Education Doctoral Program Director will give final approval for the designated transcript inclusion of "Urban Education: Mathematics Education."

Urban Education PhD Learning Outcomes

Scholars graduating from the Urban Education Doctoral Program will be able to…

- study, research, and convey contemporary educational issues within complex urban settings. (Urban Education Researchers & Practitioners)
- explore and apply frameworks to examine urban educational issues. (Urban Issues)
- conceptualize, formulate and execute methods and models used with qualitative and quantitative data. (Qualitative & Quantitative Data)
- synthesize, communicate, and defend original research in an area of specialization. (Dissertation Research)