QUANTITATIVE METHODS, PHD

The Ph.D. program in Quantitative Methods is designed to prepare students for faculty positions at universities and important responsibilities at research and assessment organizations. Graduates will be prepared to design first rate empirical research and data analyses and to contribute to development of new research methodologies.

Doctoral degree studies include advanced graduate coursework, a research apprenticeship, a Ph.D. Candidacy Examination, and the completion of a doctoral dissertation that represents an independent and significant contribution to knowledge. The research apprenticeship provides students with an opportunity to collaborate with a faculty sponsor on an ongoing basis and to participate in field research leading to a dissertation.

Students who apply directly to the doctoral-level study program following a baccalaureate degree will enroll in the core courses described for M.S.Ed. degree in SMART and the more advanced courses for the Ph.D. degree. This will include the development of independent empirical research projects.

For more information: http://www.gse.upenn.edu/qm/phd (http://www.gse.upenn.edu/qm/phd/)

View the University's Academic Rules for PhD Programs (http://catalog.upenn.edu/pennbook/academic-rules-phd/).

The Ph.D. degree program in Quantitative Methods requires a minimum of 20 course units or relevant courses and advanced degree accomplishments. A maximum of eight (8) credits from other institutions may be taken into account in reducing this basic requirement where appropriate.

Code	Title	Course Units
Required Courses		
EDUC 6625	Data Processing and Analysis (Fall)	1
EDUC 6680	Evaluation of Policies, Programs and Projects	1
EDUC 6683	Survey Methods & Design (Spring)	1
EDUC 6684	Measurement & Assessment (Fall)	1
EDUC 7667	Regression and Analysis of Variance (Fall or Spring)	1
EDUC 7668	Measurement Theory and Test Construction (Spring)	1
EDUC 7671	Factor Analysis and Scale Development (Fall)	1
EDUC 7677	Structural Equations Modeling (Spring)	1
EDUC 8629	Policy Research (Spring)	1
EDUC 8671	Randomized Trials and Experiments (Spring)	1
EDUC 8680	Complex, Multilevel, and Longitudinal Research Models (Fall)	1
EDUC 8681	Classifications, Profiles, and Latent Growth Mixture Models (Spring)	1
Electives		
Select eight electives		8
Total Course Units		**20**

Required Milestones

Qualifications Evaluation (Also known as Program Candidacy)

A Qualifications Evaluation of each student is conducted after the completion of 6 but not more than 8 course units. The evaluation is designed by the specialization faculty and may be based on an examination or on a review of a student's overall academic progress.

Preliminary Examination (Also known as Doctoral Candidacy)

A Candidacy Examination on the major subject area is required. The candidacy examination is a test of knowledge in the student's area of specialization, requiring students to demonstrate knowledge and reasoning in the key content areas in their specialization as defined by their academic division. This examination is normally held after the candidate has completed all required courses.

Oral Proposal

All doctoral candidates must present their dissertation proposals orally and in person to the dissertation committee.

Final Defense of the Dissertation

The final dissertation defense is approximately two hours in length and is based upon the candidate's dissertation.

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2023 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.