

Research Methods Experiences for Ph.D. Students

The development of research skills is a critical component of any doctoral program, and it is particularly important for Ph.D. students who are preparing for a career at a research institutions. Research methods knowledge and skills can be acquired most effectively in a combination of coursework and apprenticeship experiences. Therefore, it is important that each doctoral student carefully plans this component of his/her studies in consultation with his/her advisor.

Research Methods Courses

The research methods courses offered at the Warner School have been designed taking into consideration the diverse interests and specializations of Warner's doctoral students, as well as their increasing level of skills and sophistication as they progress in their program. Therefore, there are a number of choices available. Research methods courses must be taken in a specific order, as described below.

A common foundation: The course ED 506 Concepts and Issues in Social Science Research (formerly titled Doctoral Research Methods) has been revised to provide a foundation to all doctoral level research methods courses. This course is a required prerequisite to any other research methods course. It is strongly recommended that students take this course during their first year.

Introductory research methods courses: There are a number of complementary methodologies that are relevant to research in education and the social sciences. The following courses have been designed to provide students with an introduction to the two approaches most commonly used in educating fields:

- ED 504 Quantitative Research Methods (this course requires students to have taken ED 528 Using Quantitative Data Analysis Software or be able to otherwise demonstrate familiarity with SPSS or other quantitative research software)
- ED 507 Qualitative Research Methods

Warner Ph.D. students are required to take both of these courses after they have completed ED 506 Concepts and Issues in Social Science Research. Students are urged to take these courses early in their program.

Mini courses to learn specific research strategies: While working on their dissertation or other specific research projects, doctoral students often discover the need to learn more about specific research strategies or techniques to use in research. The following 1 credit Research Strategies Mini Courses have been created to meet this need. Additional courses will be added to the list as new needs are identified:

- ED 528 Using Quantitative Data Analysis Software
- ED 529 Using Qualitative Analysis Software
- ED 524 Survey Design

- ED 525 Interview and Focus Groups Techniques
- ED 531 Case Study Design

While none of these mini courses are required (with the exception of ED 528 Using Quantitative Data Analysis Software as a prerequisite for ED 504 Quantitative Research Methods), students finalizing their dissertation topic are strongly encouraged to discuss with their advisor the benefits of taking these courses.

Advanced research methods courses: Warner believes that future education researchers are not sufficiently served by taking only one course in qualitative and quantitative research methods. For this reason, Warner Ph.D. students are required to take at least one advanced and specialized research methods course that is consistent with their dissertation research methodology. The following courses are available (students are not limited to this list and it is possible to fulfill this requirement by taking independent study or field study credits to learn about other research methods--i.e. law, philosophy, etc.):

- ED 505 Advanced Quantitative Research Methods (*prerequisites: ED 506 and ED 504 Quantitative Research Methods*)
- ED 527 Advanced Qualitative Research Methods (*prerequisites: ED 506 and ED 507 Qualitative Research Methods*)
- ED 523 Mixed Research Methods (*prerequisites: ED 506 and ED 504: Quantitative Research Methods and ED 507: Qualitative Research Methods*)
- ED 522 Historical Research Methods (*prerequisites: ED 506*)

The advanced method courses count as part of the 30 credits of dissertation research required of all Ph.D. students. Given their specialized nature, these courses will only be offered every other year.

Apprenticeship Experiences

Research skills cannot be learned from coursework alone--and this is an important reason why a dissertation has traditionally been the capstone experience of any doctoral program. The dissertation, however, should not be the first and only apprenticeship experience during a student's doctoral program.

Research Apprenticeship: Warner believes that it is desirable to "scaffold" the dissertation experience by gaining firsthand experience within an established research project. Furthermore, participating in an established research project can provide the opportunity to observe expert researchers working on different stages of a research study, and sometimes the opportunity to co-author a publication. This is why all Ph.D. students are required to complete a Research Apprenticeship early in their program. Students should discuss their options with a Warner faculty working in their area. Students may register for ED 596 Research Apprenticeship for a variable number of credits (up to 6) as part of the 30 credits in Dissertation Research required of all Ph.D. students.

Dissertation: A student's capstone experience in the doctoral program is the dissertation, which requires students to carry out a research project of their own design independently

(although benefiting from faculty supervision and support). This experience is intended to provide students with a major opportunity not only to apply, but also to continue to develop their research skills, as they put into practice and refine what they have learned up to that point in the program.