

DOCTOR OF PHILOSOPHY IN EDUCATION, HUMAN- TECHNOLOGY COLLABORATION CONCENTRATION

The concentration in human-technology collaboration examines how being prepared to create, train, interact, and collaborate with intelligent technologies, i.e., those derived from data science, machine learning, artificial intelligence, etc., is an immediate challenge in the preparation of the global workforce. It's imperative to develop new skills and effective strategies to ask the right questions, interpret data analytics, apply data to improving performance, assess machine uncertainty, make ethical and policy judgments that integrate both data and social values, and find new ways to collaborative. In response, this concentration offers a dynamic cross-disciplinary degree researching how the collaborations of people and machines shape the future.

Visit the program website (<https://gsehd.gwu.edu/programs/phd-human-technology-collaboration/>) for additional information.

REQUIREMENTS

The following requirements must be fulfilled: 60 credits, including 36 credits in core courses, and 24 credits in the concentration, successful completion of a second-year research project, successful completion of the comprehensive examination; oral defense of both the dissertation proposal and the dissertation.

Requirements of the Doctor of Philosophy (<http://bulletin.gwu.edu/education-human-development/#doctoraltext>) program.

Code	Title	Credits
Required		
Core courses		
SEHD 8200	Foundations of Education I	
SEHD 8201	Foundations of Education II	
SEHD 8210	Doctor of Philosophy Seminar in Education Research I	
SEHD 8211	Doctor of Philosophy Seminar in Education Research II	
Research methods		
12 credits of doctoral-level research methods coursework, selected in consultation with advisor. At least one course must be in quantitative research methods and one in qualitative research methods.		
Dissertation		

SEHD 8999	Dissertation Research (taken for at least 12 credits)
Additional requirements	
Successful completion of second-year research project.	
Successful completion of the comprehensive examination.	
Oral defense of both the dissertation proposal and the dissertation.	

Code	Title	Credits
Human-technology collaboration concentration requirements		

24 credits in graduate-level courses determined in consultation with the advisor. Course selections are determined by the focus of the concentration and the specific interests of the student.

DOCTORAL PROGRAM LEVEL B COURSES

Doctoral Program Level B Courses

GSEHD's Level B research methods courses are advanced courses in a specific research methodology. All GSEHD doctoral students are required to take at least one Level B course in the methodology of their dissertation. The courses listed below are approved to meet this requirement. EDUC 8120 Group Comparison Designs and Analyses, and EDUC 8122 Qualitative Research Methods, must be completed before enrolling in a Level B course.

Some programs require more than one Level B course. Some Level B courses are taken in a predetermined sequence; for this reason, students should check each course description for prerequisites, as courses in the sequence build on others. More information regarding the Level B course sequence is available in the GSEHD Doctoral Student Handbook; (<https://gsehd.gwu.edu/student-services/>) students also may consult their faculty advisor or research methods faculty (<https://gsehd.gwu.edu/directory/>) for additional guidance.

Code	Title	Credits
EDUC 8100	Experimental Courses (Mixed Methods Research)	
EDUC 8130	Survey Research Methods	
EDUC 8131	Case Study Research Methods	
EDUC 8140	Ethnographic Research Methods	
EDUC 8142	Phenomenological Research Methods	
EDUC 8144	Discourse Analysis	

EDUC 8147	Critical Methodologies in Educational Research
EDUC 8148	Qualitative Data Collection
EDUC 8149	Qualitative Data Analysis
EDUC 8170	Educational Measurement
EDUC 8171	Predictive Designs and Analyses
EDUC 8172	Multivariate Analysis
EDUC 8173	Structural Equation Modeling
EDUC 8174	Hierarchical Linear Modeling
EDUC 8175	Item Response Theory
EDUC 8177	Assessment Engineering