Ph.D. in Measurement, Quantitative Methods, & Learning Sciences

Become a Leader in Developing and Using Quantitative Research Methods to Help Address Significant Societal Problems

Program Description

The Ph.D. in Measurement, Quantitative Methods, and Learning Sciences program equips graduates with the quantitative research methods skills necessary to design, conduct, and use research to help solve significant societal problems in a diverse, growing urban population area. A key focus is on quantitative and methodological issues that arise in both basic and applied research. In addition, graduates are provided with the skills necessary to fill a variety of roles in diverse settings in which knowledge of human development, learning theory, research and quantitative methods are essential.

Our program is for you if you want to:

- Develop innovative measurement, statistical analysis, and quantitative research methods and evaluate their utility for use in basic and applied research
- Understand and be able to apply quantitative research methods to help address significant educational, social, and psychological problems facing schools, individuals, and communities in a large and diverse urban setting
- Understand and improve learning outcomes (e.g., STEM), especially for populations facing educational disparities (e.g., students with limited English proficiency or mathematics learning disabilities, and delinquent and court-involved students)
- Engage in cutting-edge research with faculty drawing on a variety of theoretical perspectives and research paradigms

The MQM-LS Ph.D. program requires a minimum of 69 hours of coursework and allows students to complete all required coursework In 4 years or less.

Upon completion of the program, graduates will be qualified to enter careers in a variety of academic and non-academic settings, including:

- University and college professors
- Researchers in Research and Accountability Divisions of public school systems
- Data analysts or research specialists for local, state, and national government institutions or agencies and private research organizations
- Independent consultants

To learn more about our program, visit **www.coe.uh.edu**

UNIVERSITY of HOUSTON
COLLEGE OF EDUCATION

Department of Psychological, Health, and Learning Sciences

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Required Coursework (Minimum 69 Credit Hours)

Department/Foundations Core (21 Hours): *Gain foundations in major theoretical and empirical traditions*

PHLS 8302:	Research Methods in Psychological and Educational Research
PHLS 8319:	Introduction to Inferential Statistics in Psychological and Educational Research
PHLS 8322:	Intermediate Statistics in Psychological and Educational Research
PHLS 8324:	Multivariate Analysis in Psychological and Educational Research
PHLS 8300:	Advanced Educational and Psychological Measurement
PHLS 8350:	Seminar in Educational Psychology
PHLS 8310:	Psychology of Learning in STEM [Science, Technology, Engineering, and Mathematics]

Program Area Core (21 Hours): *Gain expertise necessary to design and conduct research in your field*

PHLS 8335:	Seminar in Advanced Topics in Human Development (to be renamed to: Topics in Adolescent Development)
PHLS 8342:	Seminar in Learning Theory
PHLS 8311:	Educational Disparities and Social Justice
PHLS 8321:	Structural Equation Modeling in Psychological and Educational Research
PHLS 8328:	Hierarchical Linear Modeling in Psychological and Educational Research

6 additional hours in Research Methods, Measurement, and Statistics

Specialization Electives (18 Hours): *Choose one, or a mix, of two specialization areas*

Measurement & Quantitative Methods:	Elective coursework in areas such as missing data analysis, power analysis, Bayesian statistics, mediation and moderation analysis, meta-analysis, complex survey methods, program evaluation, advanced causal inference analysis, advanced item-response theory models
Learning Sciences:	Elective coursework in areas such as cognitive, social, and emotional development, motivation, and self-regulated learning

Independent Research (9 Hours): *Complete at least two original research projects with faculty guidance*

PHLS 7398:	Candidacy Research (3 hours)
PHLS 8399:	Dissertation (6 hours total)

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Course Sequence (Minimum 69 Credit Hours)

Year 1 Fall	Spring	Summer
PHLS 8350: Seminar in Educational Psychology	PHLS 8311: Educational Disparities & Social Justice (or PHLS 8335)	Elective
PHLS 8319: Introduction to Inferential Statistics	PHLS 8322: Intermediate Statistics	
PHLS 8302: Research Methods	PHLS 8310: Psychology of Learning in STEM	

Year 2 Fall	Spring	Summer
PHLS 8342: Seminar in Learning Theory	PHLS 8335: Topics in Adolescent Development (or PHLS 8311: Educational Disparities & Social Justice)	Elective
PHLS 8324: Multivariate Analysis	PHLS 8300: Advanced Educ./Psych. Measurement	
Elective	PHLS 7398: Candidacy Research	

Year 3 Fall	Spring	Summer
PHLS 8321: Structural Equation Modeling	PHLS 8328: Hierarchical Linear Modeling	Elective
Elective	Elective	

Year 4 Fall	Spring	Summer
Elective	PHLS 8399: Dissertation	
PHLS 8399: Dissertation	Elective	

Beginning Fall 2016 for students without waived coursework or transferable graduate credit. XXX Course number TBD.

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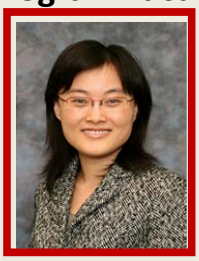
Program Faculty and Research Interests



Dr. Weihua Fan

Associate Professor & Program Director, Email: wfan@central.uh.edu

Research interests: Multivariate and latent models including multilevel model, longitudinal model, latent class analysis, measurement invariance, robust statistics and their applications on educational, health and psychological issues under the umbrella of motivational, cognitive and psychological processes relating to students' school success and STEM choices.

Dr. Yu Liu

Assistant Professor, Email:yliu107@uh.edu

Research interests: Statistical modeling of longitudinal data using multiple frameworks, including multilevel (mixed) modeling, growth curve modeling and dynamical systems; characterization of measurement invariance over time in longitudinal studies with ordinal measurement; missing data analysis; Bayesian analysis.

Dr. Hanjoe Kim

Assistant Professor, Email: hkim54@uh.edu

Research interests: Survival analysis, multilevel (clustered) data analysis, propensity score analysis, mediation and moderation analysis, measurement invariance, item response theory and utilizing quantitative methods for intervention research.

Dr. Margit Wiesner

Associate Professor, Email: mfwiesner@uh.edu

Research interests: Longitudinal data analysis, latent variable modeling, measurement invariance of mental health screening instruments, development of delinquency and other health-risking behaviors, youth violence exposure, vocational career pathways.

Dr. Zenaida Aguirre-Muñoz

Associate Professor, Email: zaguirre-munoz@uh.edu

Research interests: The intersection of cognition, learning, assessment, and language development of ELs at the K-12 level. This work involves; (a) STEM teaching and learning; (b) the assessment and instruction of culturally and linguistically diverse students; (c) the impact of opportunity to learn on engagement and achievement; and (d) content-area literacy development for English learners.

Dr. Sara J Jones

Assistant Professor, Email: sjjones3@uh.edu

Research interests: A mix of qualitative and quantitative research methods to understand how technology is shaping the learning environment and increasing student engagement and learning, and how to capitalize on those changes.

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Admission

Students must complete and fully satisfy the department, college, and university requirements for admission to the program. For a full list of application materials and detailed instructions, visit http://www.uh.edu/education/admissions/graduate/.

Application Deadline

Students who wish to begin the program in the Fall of the academic year must apply by the due date posted on the graduate application website (approx. **December 1)**. No Spring admittance.

Admissions Factors

Admission is based on a competitive applicant pool. The following represent information considered for admissions:

- Graduate Record Exam scores
- Three Letters of Recommendation
- Goal Statement
- Writing Sample
- Official Transcripts

Financial Support

Please consult information provided on the departmental and college website about a variety of financial support and scholarship opportunities.

UH Equal Opportunity

The University of Houston provides equal treatment and opportunity to all persons without regard to race, color, religion, national origin, sex, age, disability, veteran status or sexual orientation except when such distinction is required by law.

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We look forward to helping you achieve your career and professional goals!

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