Psychological and Quantitative Foundations

Chair

- Dennis "Martin" Kivlighan

Undergraduate minor: educational psychology

Graduate degrees: MA in psychological and quantitative foundations; EdS in psychological and quantitative foundations; PhD in psychological and quantitative foundations

Faculty: https://education.uiowa.edu/directory

Website: https://education.uiowa.edu/about/administration/department-psychological-and-quantitative-foundations

Courses

Students may receive credit for only two of these three courses: STAT:1010 Statistics and Society, STAT:1020 Elementary Statistics and Inference (same as PSQF:1020 Elementary Statistics and Inference), and STAT:1030 Statistics for Business. Credit for STAT:1010 is given only if the course is taken before STAT:1020 (same as PSQF:1020) or STAT:1030.

Psychological and Quantitative Foundations Courses

PSQF:1020 Elementary Statistics and Inference 3 s.h.
Graphing techniques for presenting data, descriptive statistics, correlation, regression, prediction, logic of statistical inference, elementary probability models, estimation and tests of significance. Requirements: one year of high school algebra or MATH:0100. GE: Quantitative or Formal Reasoning. Same as STAT:1020.

PSQF:1027 Mindfulness Foundations in the Helping Professions 3 s.h.
Training in Mindfulness-Based Practices; application to personal and professional life.

PSQF:1029 First-Year Seminar 1 s.h.
Small discussion class taught by a faculty member; topics chosen by instructor; may include outside activities (e.g., films, lectures, performances, readings, visits to research facilities).

PSQF:1039 Undergraduate Excellence Seminar 1 s.h.
Designed to enhance student's ability to successfully navigate the undergraduate experience by providing an opportunity to develop new skills and behaviors, as well as reflect on attitudes, in order to achieve academic and personal success.

PSQF:1050 Learning Online Successfully 2 s.h.
Experiences in an online environment and opportunities to engage with digital materials for learning to develop skills and strategies for future classes; assess resources for successful online learning, participate in a variety of online learning environments including online discussions and collaborations, develop strategies for reading and marking digital materials, managing time for working and studying online, and plan for future courses that may be online or include digital course materials.

PSQF:1075 Educational Psychology and Measurement 3 s.h.
Principles and classroom applications of cognitive and social development, learning and cognition, motivation, and assessment.

PSQF:2115 Introduction to Counseling Psychology 3 s.h.
Historical and philosophical foundations of counseling psychology; theories, application, and work of counseling psychologists. GE: Social Sciences.

PSQF:2116 Applied Child and Adolescent Psychology 3 s.h.
Overview of child and adolescent development, psychopathology, and basic-level intervention; foundation for working in applied child and adolescent mental health settings; typical areas of psychological difficulty, including developmental disorders, ADHD, depression, anxiety, substance use; contextual and environmental factors, including abuse, poverty, neglect.

PSQF:3028 Mindfulness for Educators: Psychological Foundations, Applications, and Practices 1-2 s.h.
Exploration of research-based implications for teaching, learning, and daily living; skillful engagement of demands educators face in personal and professional lives; mindfulness as paying attention in present moment and relating wisely to what is occurring; specific mindfulness practices that integrate awareness into daily living; how research and program evaluations throughout the world document that consistent practice of mindfulness improves attention and concentration; ability to respond skillfully to stress, self-regulation of emotion, physical and mental health, communication, life satisfaction.

PSQF:3075 Brain Behavior 3 s.h.
Course is applied in nature, so that students not only learn brain behavior and anatomy, but also learn how these are directly related to neurological and neurobehavioral disorders; helps to understand the biological aspects of disorders that are needed to treat in practice settings; for students in applied psychology or other applied programs of study. Prerequisites: PSY:2701 and PSQF:2115 with a minimum grade of C-.

PSQF:3103 Early Childhood Guidance 4 s.h.
Effective communication, understanding child development and behavior, appropriate limits and rules, structuring problem solving and consequences, fostering self control, organizing classroom environment and curriculum to support child behavior, methods to address persistent and challenging behaviors; nurturance and child guidance via parenting, child rearing practices, and child-family relations.

PSQF:3104 Multicultural Issues in Counseling and Psychology 3 s.h.
Introduction to multicultural competencies and its importance to counseling, psychology, and helping professions; psychological concepts and research pertaining to privilege; racism, race, culture, sexual orientation, social class and classism, and their application in culturally adapted psychotherapy interventions; how these matters and other cultural identities and constructs are handled and used in applied psychology and counseling; focus on intersection of research and practice.

PSQF:3191 Asian American Experiences 3 s.h.
Aggregate experiences of Asian Pacific Americans, starting from developments in countries of origin to their contemporary issues; histories of various Asian Pacific American groups (e.g., Chinese, Korean, Filipino, Japanese, Asian Indian, Hawaiians, Vietnamese, etc.), as well as culture, politics, the media, and stereotypes; similarities among the different Asian Pacific American groups, as well as a comparative look at how African, Latino, and Native American experiences help shape and contribute to Asian Pacific America.

PSQF:3333 Special Topics in Psychological and Quantitative Foundations arr.
Topics related to psychological and quantitative foundations.

PSQF:3700 Introduction to Understanding Trauma and Resilience 3 s.h.
Introduction to understanding key concepts of trauma-informed systems of care in multiple settings; identification of various types of trauma along with behaviors and responses seen in survivors of trauma; students trace effects of historical trauma of marginalized communities and multiple trauma survivor groups to understand the consequences of trauma and its impact in the culture; resilience and strategies to offset consequences of trauma. Same as SSW:3700.

PSQF:4106 Child Development 3 s.h.
Theories and research findings about typical course of child development, differences in development. Requirements: junior standing.

PSQF:4111 Human Motivation 3 s.h.
Principles of motivation and their application to applied settings, especially to the classroom as teachers try to motivate students. Requirements: junior standing.

PSQF:4120 Psychology of Giftedness 3 s.h.
Theories of learning, child development, motivation; issues unique to gifted education. Same as CSED:4120.

PSQF:4121 Identification of Students for Gifted Programs 3 s.h.
Interpretation of standardized tests and other measurement instruments used to identify academic talent and program effectively for grades K-12; ability, aptitude, achievement tests; current issues in the uses of various instruments. Same as CSED:4121.

PSQF:4122 Math Programming for High Ability Students 1 s.h.
Unique challenges and opportunities confronted by teachers of high-ability students; theory and practice, development of program outlines for implementation. Same as EDTL:4022.

PSQF:4123 Academic Acceleration: Providing Excellence and Equity in Education for High Ability Students arr.
Acceleration as an effective curricular intervention for high-ability students; forms of acceleration, research evidence for acceleration, and process of implementing acceleration; reasons for persistent negative attitudes about acceleration; advocation for acceleration; skills for effective practice and implementation. Requirements: computer with internet access, sound card, Adobe Reader, and Adobe Flash Player.

PSQF:4125 Counseling and Psychological Needs of the Gifted 1 s.h.
Psychological aspects of giftedness, counseling techniques appropriate for gifted children, adolescents; socio-emotional concerns, career development, underachievement. Same as CSED:4125.

PSQF:4126 Cognitive and Affective Needs of Underachieving Gifted 1 s.h.
Diagnostic strategy for identifying types of underachievement, teaching and counseling interventions appropriate for each. Same as CSED:4126.

PSQF:4128 Neuroscientific Implications for Gifted 1 s.h.
Neurology of behavior and neurodegenerative disease; the psychology of learning and memory, its application to gifted education.

PSQF:4129 Creativity: Issues and Applications in Gifted Education 1 s.h.
Theories that underpin contemporary definitions of creativity; instruments developed to measure creativity; activities in the school environment that enhance or inhibit student creativity. Same as CSED:4129.

PSQF:4130 Early Adolescent Development 3 s.h.
Psychological growth and development of the early adolescent (ages 10-14), including the physical, cognitive, social, emotional, and sexual development of the middle-school aged child.

PSQF:4133 The Adolescent and Young Adult 3 s.h.
Psychological and social aspects of adolescence and young adulthood; emphasis on theory, research, and practical applications.

PSQF:4134 Parent-Teacher Communication 1-3 s.h.
Realities of working with parents; interpersonal skills; options for parent support services. Same as EDTL:4934.

PSQF:4136 Home/School/Community Partnerships 3 s.h.
Issues related to collaboration among families, educators, community members in implementing school programs. Same as EDTL:4936.

PSQF:4143 Introduction to Statistical Methods 3 s.h.
Analysis, interpretation of research data; descriptive statistics; introduction to probability, sampling theory, statistical inference (binomial, normal distribution, t-distribution models); linear correlation, regression. Same as STAT:4143.

PSQF:4145 Marriage and Family Interaction 3 s.h.
Contemporary American couple, marriage, and family relationships; mate selection. Same as CSED:4145.

PSQF:4150 Introduction to Educational Measurement 3-4 s.h.
Test development procedures, reliability, validity, item writing, evaluation of item and test characteristics; classroom assessment methods; interpretation of scores from standardized achievement and aptitude tests; no background in statistics assumed.

PSQF:4162 Introduction to Couple and Family Therapy 3 s.h.
Evolution of the family therapy movement and issues related to functional and dysfunctional family systems; significant models of family therapy and specific techniques. Same as CSED:4162.

PSQF:4281 Cognitive Principles for How People Learn 3 s.h.
Survey of contemporary cognitive science; history, intellectual tools, and utility in life and applied settings (e.g., teaching, research, industry, government).

PSQF:4520 Bayesian Statistics 3 s.h.
Bayesian statistical analysis, with focus on applications; Bayesian and frequentist methods compared; Bayesian model specification, choice of priors, computational methods; hands-on Bayesian data analysis using appropriate software; interpretation and presentation of analysis results. Prerequisites: STAT:3200 and (STAT:3101 or STAT:4101 or STAT:3120). Same as IGPI:4522, STAT:4520.

PSQF:4740 Issues in K-12 Assessment 3 s.h.
Examination of research, policies, and practices related to classroom and large-scale educational assessment; focus on use and construct of formative and summative assessments for classroom teaching and basics of educational measurement; coverage of educational assessment including development of plans that integrate teaching and assessment; use of formative assessment strategies and providing effective feedback to students; crafting objective, performance, and portfolio assessments; evaluation of students; interpretation of state-mandated tests and standardized achievement tests.

PSQF:4750 Learning Environments: Design, Context, and Activity 3 s.h.
Students explore the design of learning environments and the kinds of activities that take place there; includes a general background on design of learning environments; emphasis on project- and problem-based learning (considered to be keys to 21st-century learning), media inclusion, and how teacher facilitation/questioning and cooperative learning are foundational for success.

PSQF:4760 Participatory Learning and Media: Creating, Remixing, Making, and Education 3 s.h.
Teaching and learning with 21st-century digital media; pedagogical approaches characterized by participatory learning that expands and blurs boundaries of the classroom; remixing educational, social, and entertainment-based media toward pedagogical ends that meet instructional goals; engagement with social media, web-based video, interactive media, podcasts, games, and simulations.

PSQF:4910 Theories of Family Development 3 s.h.
Overview of historical and contemporary theories across disciplines about family development and family relationships; examination of family as a context for relationships between partners and between parents and children across the life course; evaluation of research on family system (e.g., coupling, "doing" gender, parenting, work and family balance, family transitions, economic hardship).

PSQF:5150 Introduction to Counseling and Skills 3 s.h.
Introduction to the field of counseling and psychology; provides students with clinical foundational skills; students explore the counseling process, how to conduct interviews, and how to integrate theory into their assessment and clinical work; introduction to basic concepts of working relationship and alliance, common factors, and interventions; practice provides students with experiences needed to understand concepts.

PSQF:5151 Health and Wellness Counseling Psychology 3 s.h.
Introduction to the concepts of health psychology and wellness in counseling and psychology; focus on psychological, biological, and ecological factors impacting health and wellness in multiple cultural contexts; research on psychological and holistic interventions, prevention strategies for clients across the lifespan.

PSQF:5152 Assessment and Diagnosis 3 s.h.
Group and individual appraisal techniques used to support career, educational, and personal planning and development; exploration of standardized and non-standardized data and information gathering methods, validity, reliability, psychometric statistics, factors influencing appraisals, use and interpretation of appraisal results with varied populations; assessment techniques and interviews connected to psychological diagnosis through standardized diagnostic frameworks, such as the DSM and ICD.

PSQF:5165 Introduction to Program and Project Evaluation 3 s.h.
Skills and knowledge required for conducting evaluations of products, projects, and programs; recent scholarship on evaluation and project management. Same as EPLS:5165.

PSQF:5193 Special Readings and Projects arr.
Supervised individual study. Requirements: senior standing.

PSQF:5194 Continuing Education Individual Study arr.
Supervised individual study.

PSQF:5199 Topical Workshop in Psychological and Quantitative Foundations arr.
School, educational, and counseling psychology and allied disciplines; for professionals and graduate students in education, mental health, social services, related fields.

PSQF:5219 Foundations of Health Service/School Psychology 3 s.h.
Introduction to health service/school psychology; becoming competent leaders in health service in community settings; roles and functions of psychologists in health service; ethical standards, issues, and professional practices related to health service psychology; legal issues; current topics and trends.

PSQF:5226 Assessment of Giftedness 3 s.h.
Training and practice in assessment of gifted children. Same as CSED:5226.

PSQF:5262 Advanced Couple and Family Therapy 3 s.h.
Review and critique couple and family therapy theory, ethics, and techniques as applied to problems of couple and family over the life span; multicultural considerations. Requirements: advanced graduate standing. Recommendations: PSQF:4162.

PSQF:5265 Research Methods in Couple and Family Therapy 3 s.h.
Review and analysis of pertinent literature in area of research methods in couple and family therapy; exploration of stages of clinical trials and the process of federal funding of intervention research in couple and family therapy and family psychology; commonly used research methods in couple and family therapy reviewed and critically analyzed; students use these methods to survey research literature in top journals of the field.

PSQF:5900 Psychometrics 1-3 s.h.
Psychometric theory and techniques associated with development, interpretation, and evaluation of tests and measures; psychometric principles necessary for test inference, validation, construction, and use.

PSQF:6200 Educational Psychology 3 s.h.
Psychology of the learning/instruction process: theoretical perspectives on learning, instruction, motivation, and assessment; developmental concepts, social processes, individual variation, learning and technology, biological basis of learning.

PSQF:6203 Tools and External Representations in Individual and Social Learning 3 s.h.
Theories and approaches to research and practice regarding the use of technology and scientific representations in teaching and learning; historical, cultural, cross-species, and contemporary informal lenses applied to understanding human knowledge as it interacts with tools and how tools mediate thinking and learning; project to design a technology-supported learning solution for a problem related to teaching and learning.

PSQF:6204 Foundations of the Learning Sciences 3 s.h.
Foundations of interdisciplinary science of learning; theory and method of study of cognition in sociocultural context; design-based approaches to research on learning; history of several key concepts traced to determine origins; how contemporary literature is situated in this intellectual history.

PSQF:6205 Design of Instruction 3 s.h.
Introduction to processes used to design, develop, implement, and evaluate effective instruction; projects.

PSQF:6206 Advanced Child Development 3 s.h.
Theories of social and cognitive development; in-depth study of several current issues in the field.

PSQF:6208 Digital Media and Learning 3 s.h.
Theory, design, and evaluation of instructional media.

PSQF:6209 Survey Research and Design 3 s.h.
Survey design and implementation; writing and evaluation of survey questions; error in survey research; techniques to reduce error; sampling; postcollection processing of survey data. Prerequisites: EPLS:6206 or PSQF:4143. Same as EPLS:6209.

PSQF:6211 Universal Design and Accessibility for Online Instruction 3 s.h.
Universal Design for Learning (UDL) framework; introduction to accessibility for online learning environment; use of UDL with any curriculum to provide more students with access to learning, including online learning environment.

PSQF:6213 Advanced Lifespan Development 3 s.h.
Selected theories and research in development across the lifespan; focus on relevance for instruction and counseling.

PSQF:6214 Design of Learning Environments: Theory, Practice, and Method 3 s.h.
Theory, practice, and research method of the design of learning environments; broadly conceived understanding of technology-based learning environments; includes a semester-long project to design or evaluate the design of a learning environment, technology-based or otherwise.

PSQF:6215 Online Instruction: Design and Facilitation 3 s.h.
Theory and practice of designing and facilitating online learning environments to support or deliver instruction; student project to create an instructional online environment that draws on the theory and principles of online learning and instructional design.

PSQF:6216 Tools and Utilities for Online Teaching 3 s.h.
Guidance for future online teachers in making well-informed decisions on what technologies need to be adopted and applied for high quality, successful online educational programming in a variety of environments (e.g., K-12, higher education, business and industry); choosing, learning, evaluating, and using different types of technologies to produce online instruction; how to learn; initiating and managing learning and professional development for effective online teaching. Corequisites: PSQF:6205, if not taken as a prerequisite.

PSQF:6217 Seminar in College Teaching 1-3 s.h.
Preparation for college teaching; for graduate students planning to teach. Same as GRAD:6217.

PSQF:6220 Quantitative Educational Research Methodologies 3 s.h.
Procedures for planning, conducting, and reporting research; evaluation of current methods in educational research; quantitative designs and methods. Prerequisites: PSQF:4143 or STAT:4143.

PSQF:6223 Introduction to Counseling Psychology Practice/Research I 3 s.h.
Historical, theoretical, professional, scientific traditions associated with counseling psychology; professional ethical principles.

PSQF:6225 Introduction to Counseling Psychology Practice, Research, and Theory 3 s.h.
Learning and performance of basic helping skills; integration of these skills with counseling theories, broader counseling strategies; laboratory-based.

PSQF:6230 Research in Educational Psychology 1-3 s.h.
Design, implementation, and presentation of an educational psychology empirical research project. Requirements: graduate standing in educational psychology.

PSQF:6233 Ethics for Behavioral Psychologists 1 s.h.
Ethics that are unique to applied behavior analysis; ethical considerations.

PSQF:6235 Multicultural Counseling 3 s.h.
Theoretical and practical aspects of the cultural adaptation process; implications for interventions in diverse populations; issues. Requirements: counseling skills introductory course.

PSQF:6238 Assessment of Learning Differences 3-4 s.h.

PSQF:6241 Quantitative Policy Analysis for Practitioners 3 s.h.
Introduction to applied research and statistics with focus on understanding quantitative research, data collection and analysis, and reporting results for decision-making.

PSQF:6242 Selected Applications of Statistics 3 s.h.
Application and interpretation of correlation techniques, chi-square, t- and f-tests, interval estimation, simple cases of analysis of variance. Prerequisites: PSQF:4143.

PSQF:6243 Intermediate Statistical Methods 3 s.h.
Statistical inference and uncertainty estimation using general linear models (i.e., linear regression, analysis of variance); interpreting and conveying statistical results. Requirements: for PSQF:6243—PSQF:4143; for STAT:6513—STAT:4143. Same as STAT:6513.

PSQF:6244 Correlation and Regression 4 s.h.
Correlation techniques; selected bivariate procedures, multiple, partial, curvilinear correlation; multiple linear regression; sampling theory applied to regression analysis and correlation coefficients; simple causal models. Requirements: for PSQF:6244—PSQF:6243; for STAT:6514—STAT:6513. Same as STAT:6514.

PSQF:6246 Design of Experiments 3 s.h.
Theory and methods in the planning and statistical analysis of experimental studies; testing of hypotheses about linear contrasts among means in single-factor and multifactor, completely randomized, and repeated measurement designs. Requirements: for PSQF:6246—PSQF:6243; for STAT:6516—STAT:6513. Same as STAT:6516.

PSQF:6247 Nonparametric Statistical Methods 3 s.h.
Selected nonparametric methods; one- and two-sample location tests and estimation methods, measures of association, analyses of variance; emphasis on relationships to classical parametric procedures. Same as STAT:6547.

PSQF:6248 Research Synthesis and Meta-Analysis 3 s.h.
Rationale and methods for research synthesis and meta-analysis; conceptual issues in quantitative research synthesis in the social sciences and other disciplines, including medicine; thorough understanding of concept of sampling distribution is needed to understand the statistical methods introduced. Prerequisites: PSQF:6246 or PSQF:6244.

PSQF:6249 Factor Analysis and Structural Equation Models 3 s.h.
Fundamentals and applications of latent variable models for measurement including confirmatory factor analysis, item response theory, item factor analysis, and structural equation models using currently available software. Prerequisites: PSQF:6243. Recommendations: PSQF:6270.

PSQF:6250 Computer Packages for Statistical Analysis 1-3 s.h.
Computer programs and systems designed to execute statistical analysis (SAS, SPSS, BMDP, and others); lectures on regression techniques, analysis of variance, multivariate techniques; practice in entering data, calling up desired programs, interpreting computer output. Prerequisites: PSQF:6243. Requirements: elementary knowledge of computer programming.

PSQF:6252 Introduction to Multivariate Statistical Methods 3 s.h.
Selected topics in multivariate analysis, including multivariate significance tests, principal components and factor analysis, discriminant analysis, canonical correlation, multivariate analysis of variance (MANOVA). Prerequisites: PSQF:6244 and PSQF:6246.

PSQF:6254 Causal Inference and Observational Designs 3 s.h.
Conceptual and technical issues in the design of observational and quasi-experimental studies in natural settings and the appropriate analysis of data for making causal inferences. Requirements: PSQF:6220 and PSQF:6244 and PSQF:6246.

PSQF:6255 Construction and Use of Evaluation Instruments 3 s.h.
Design and construction of measures used in educational evaluation: achievement tests, attitude scales, performance measures, questionnaires; emphasis on methods of instrument development and evaluation of instrument characteristics. Prerequisites: PSQF:4143 and PSQF:6257.

PSQF:6257 Educational Measurement and Evaluation 3 s.h.
Evaluation and use of standardized tests and inventories in individual and group assessment; analyzing reliability, validity, normative data; interpreting measures of achievement, intelligence, aptitude, interests, attitudes, personality; current issues; for counselors, administrators, teachers, measurement specialists. Corequisites: PSQF:4143.

PSQF:6258 Theory and Technique in Educational Measurement 3 s.h.
Mathematical foundations, principal results, and applications of classical test theory; perspectives on conditional error variance; binomial error model and applications; introduction to generalizability theory; advanced measurement topics. Prerequisites: PSQF:6243 and PSQF:6257.

PSQF:6259 Scaling Methods 3 s.h.
Unidimensional and multidimensional scaling techniques; item response theory with a focus on polytomous models; introduction to available computer programs for scaling; applications in educational and psychological research. Prerequisites: PSQF:6262. Corequisites: PSQF:6249 and PSQF:6252.

PSQF:6260 Diagnostic Assessment 3 s.h.
Model-based approaches to providing diagnostic information about test takers along with implications for design of diagnostic assessments; primary focus on how psychometric models can be used with diagnostic subscores to provide reliable information that can be used in educational curricula. Prerequisites: PSQF:6243 and (PSQF:6258 or PSQF:6262).

PSQF:6262 Item Response Theory 3 s.h.
Theoretical foundations and practical applications; mathematical models and estimation techniques; emphasis on current applications and issues in testing; computer estimation programs. Prerequisites: PSQF:6243 and PSQF:6257.

PSQF:6263 Consultation Theory and Practice 3 s.h.
Review of concepts and practice of consultation and collaboration in educational and human services settings; focus on mental health, organizational, behavioral, and instructional models. Same as CSED:6263.

PSQF:6265 Program Evaluation 3 s.h.
Theoretical issues and considerations in evaluation of educational and social programs; evaluation design, methodology; metaevaluation; evaluation utilization. Same as EPLS:6266.

PSQF:6270 Generalized Linear Models 3 s.h.
Applied treatment of generalized linear models for predicting non-normal outcomes (e.g., binary, ordinal, nominal, count, zero-inflated, skewed responses); univariate models for single outcomes, multivariate models using path analysis; may include additional topics (e.g., quantile regression). Recommendations: PSQF:6243 and familiarity with general linear models for cross-sectional data (multiple linear regression, analysis of variance).

PSQF:6271 Longitudinal Multilevel Models 3 s.h.
Applied treatment of analysis of longitudinal data using framework of multilevel models (e.g., general linear mixed models, hierarchical linear models); general linear models, repeated measures analysis of variance, alternative covariance structures, fixed and random effects of time within linear and nonlinear models of change, and time-invariant predictors; may include advanced topics (e.g., models for non-normal outcomes, time-varying predictors). Recommendations: PSQF:6243 and familiarity with general linear models for cross-sectional data (multiple linear regression, analysis of variance).

PSQF:6272 Clustered Multilevel Models 3 s.h.
Applied treatment of analysis of clustered data using framework of multilevel models (e.g., generalized linear mixed models, hierarchical linear models); general linear models, fixed and random effects within linear and nonlinear models (for non-normal outcomes), and use of nested or crossed sources of sampling; may include advanced topics (e.g., three-level models). Recommendations: PSQF:6243 and familiarity with general linear models for cross-sectional data (multiple linear regression, analysis of variance).

PSQF:6275 Constructivism and Design of Instruction 3 s.h.
Theoretical foundations of constructivism; application of constructivist principles to the design of instruction.

PSQF:6281 Cognitive Theories of Learning 3 s.h.
Theories of cognition as they relate to learning, education, and changes in individual thinking, behavior, and identity; development of expertise; mental representations and psychological mechanisms; design of cognitive assessments and learning tasks; focus on learning in academic disciplines, clinical contexts, and game-based environments.

PSQF:6292 Supervised Research in Educational Psychology 1-3 s.h.
Identification of research problems, development of research designs and materials, conducting of research studies; faculty-guided activity or seminars.

PSQF:6293 Individual Instruction in Psychological and Quantitative Foundations arr.

PSQF:6299 MA Project: Portfolio/Internship/ Practicum 1-3 s.h.
Individual portfolio/internship/practicum project; reflection, revision, and presentation of educational psychology portfolio.

PSQF:6312 Psychopathology Across the Lifespan 3 s.h.
Diagnostic and Statistical Manual of Mental Disorders (DSM) categories and related diagnostic issues.

PSQF:6417 Introduction to Postsecondary STEM Teaching 1,3 s.h.
Introduction to teaching and learning theory and practice; readings and discussions facilitate research-based teaching practices in science, technology, engineering, and math (STEM) classrooms; connection of theories to principles of course and lesson design to support effective teacher practices and student learning; for students in STEM disciplines.

PSQF:7201 Counseling Psychology Research Writing 3 s.h.
How to write scientifically in counseling psychology; qualitative and quantitative research writing, literature reviews, methodologies, discussions; APA style.

PSQF:7225 Introduction to Health Service/School Psychology Practice 1-3 s.h.
Introduction to practice of health service/school psychology; framework for understanding role and function, legal and ethical boundaries, professional requirements; preparation for practicum.

PSQF:7237 Beginning Practicum in School Psychological Service arr.
Supervised practicum in psychological and educational evaluation in school settings. Prerequisites: PSQF:6238.

PSQF:7255 Autism Spectrum Disorders 2 s.h.
Overview of autism spectrum disorders (ASDs), including autistic disorder, Asperger's disorder, other pervasive developmental disorders; ASD diagnoses and their etiology; tools used in assessing individuals with ASDs; common interventions for ASDs; resources for work with individuals who have ASDs.

PSQF:7270 Scholarly Integrity and Responsible Conduct of Educational Research and Evaluation arr.
Students are introduced to and deepen their knowledge and skill in applying principles for the responsible conduct of educational research and evaluation and related social sciences; two modules addressing core areas identified by federal policy as minimal requirements for knowledge and skill in practice of research with scholarly integrity; format is discovery and discussion—presentation of background information for each topic is followed by discussion of case studies and other examples relevant to each topic; for research assistants.

PSQF:7305 Psychotherapy I: Dynamic and Phenomenological Approaches 3 s.h.
Major psychodynamic and existential-phenomenological theories of personality; emphasis on implications for psychotherapy.

PSQF:7306 Psychotherapy III: Work Psychology and Career Interventions 3 s.h.
Foundations of career interventions; emphasis on major assessment instruments (vocational interests, values, abilities/skills, personality) and career counseling processes, skills, techniques.

PSQF:7309 Personality Assessment 3 s.h.
Standardized and projective techniques for personality assessment; preparation for competent administration and interpretation of varied tests and measures.

PSQF:7310 Intelligence Assessment 3 s.h.
Standardized intelligence testing; preparation to administer and interpret intelligence tests for children and adults.

PSQF:7313 Psychopathology in Childhood 3 s.h.
Current theories regarding the development of psychopathology in children and adolescents; current approaches to treatment for disorders in children and adolescents.

PSQF:7315 Social and Emotional Assessment of Children and Adolescents 3 s.h.
Link between personality theory, child and adolescent assessment; interpretation, integration of assessment information; record reviews, interviews, objective tests, projective techniques. Prerequisites: PSQF:6238.

PSQF:7320 History and Systems of Psychology 3 s.h.
Philosophical underpinnings of psychology, early systems in psychology, developments in the 20th century.

PSQF:7331 Qualitative Educational Research Methods 3 s.h.
Introduction to concepts, methods, and issues in qualitative research in educational settings; exploration of how qualitative methods can inform research in a field of interest and engage in collaboration and peer review.

PSQF:7337 Advanced Practicum in School Psychology arr.
Supervised experience in psychological interventions, consultation, counseling in school and clinic settings. Prerequisites: PSQF:6238 and PSQF:7237.

PSQF:7342 Research Project in School Psychology arr.
Experience in research facilities on campus; writing research questions, planning a research study, writing a research article.

PSQF:7344 Academic Interventions 3 s.h.
Interventions used by school and support system personnel to address academic skill deficits among children and adolescents; instructional design and delivery problems associated with deficits.

PSQF:7346 Behavioral Interventions 3 s.h.
Interventions used by school and support system personnel to address behavioral and social/emotional status of children, adolescents.

PSQF:7347 Home/School/Community: System Interventions 3 s.h.
Interventions used by school and support system personnel; focus on work with parents, siblings. Same as CSED:7347.

PSQF:7350 Seminar in Evaluation 2-3 s.h.
In-depth examination of selected topics. Prerequisites: PSQF:5165 or EPLS:5165 or PSQF:6265 or EPLS:6266. Requirements: two courses in program evaluation.

PSQF:7352 Seminar: Behavioral Assessment and Evaluation 3 s.h.
Broadens skills of graduate students who engage in research with exceptional persons; research designs are usually taught in the Department of Psychological and Quantitative Foundations, but because of the nature of handicapping conditions and the low incidence of some handicaps, the single-subject design yields better research information. Same as EDTL:7952.

PSQF:7354 Seminar: Experimental Approaches in Counseling Research arr.
Application of experimental methodology to study of counseling and vocational phenomena.

PSQF:7355 Seminar: Educational Measurement and Evaluation arr.
Critical examination of current issues and problems of the professional worker in the field of educational measurement and evaluation as reflected in research literature, other professional communication media.

PSQF:7356 Process and Outcomes in Counseling Psychotherapy 3 s.h.
Advanced knowledge of the state of process and outcome research on psychotherapeutic procedures. Requirements: PhD candidacy in appropriate field.

PSQF:7358 Equating and Scaling of Educational Tests 3 s.h.
Designs and methods, including linear, equipercentile, and item response theory methods; emphasis on concepts, applications to testing programs, research. Prerequisites: PSQF:6243 and PSQF:6257.

PSQF:7361 Advanced Practicum in Couple and Family Therapy 1-3 s.h.
Opportunity to accumulate client contact and supervision hours towards graduation and licensure; conceptual and executive skills, observational skills and abilities to work as a member of a therapeutic team, awareness of how personal growth and development as a therapist impacts work with clients, comfort and motivation to learn multiple training levels provided, creation of collaborative and supportive atmosphere on all practicum levels. Requirements: enrollment in couple and family therapy program.

PSQF:7365 Theories of Psychotherapy 3 s.h.
Major psychotherapy theories with emphasis on empirically validated theories used in clinical practice.

PSQF:7367 Social Psychology and Social Systems 3 s.h.
Social aspects of behavior in organizations; behavioral science theory and research on organizations, system change, transformation, leadership.

PSQF:7371 Seminar in Learning Sciences and Educational Psychology arr.
Intensive investigation of a specific research topic.

PSQF:7375 Topics in Educational Measurement and Statistics 1-3 s.h.

PSQF:7380 Practicum in College Teaching arr.
Supervised college teaching experience in courses related to major academic areas, in collaboration with faculty course instructors.

PSQF:7385 Teaching and Learning in Higher Education 3 s.h.
Current theoretical and empirical literature on teaching and learning in higher education; focus on development of effective teaching practice. Same as CSED:7385, EDTL:7385, EPLS:7385, GRAD:7385.

PSQF:7388 Family Development 3 s.h.
Overview of research relating to family development, family structure, and cultural/ethnic diversity; how research can be applied to clinical practice; focus on strengths and challenges of families with varying structures, cultural dimensions in family functioning, developmental perspectives on family functioning, and how these factors can advance family systems based on research and practice.

PSQF:7389 Seminar in Couple Intervention Research 3 s.h.
Overview of couple intervention and outcome research; focus on evidence-based couple therapies (i.e., Emotionally Focused Couple Therapy, Behavioral Couple Therapy, work of John Gottman); research addressing effectiveness and efficiency of couple interventions in treatment of couple distress issues highly comorbid with distress, including review of mental and physical health problems; research addressing factors associated with treatment outcomes.

PSQF:7390 Supervision of School Psychology Practicum/Internship arr.
Experience supervising school psychology practicum or internship students. Requirements: PhD standing.

PSQF:7393 MA Thesis in Psychological and Quantitative Foundations arr.

PSQF:7394 Supervised Research in Counseling Psychology 1-3 s.h.

PSQF:7395 Social Context and Family Research 3 s.h.
Review and analysis of pertinent research surrounding social contexts in which families live; specific focus on reviewing and critically analyzing decade reviews and current advancements in family research; students evaluate how research surrounding social context and family research is relevant to the practice of couple and family therapy.

PSQF:7399 Supervision in Couple and Family Therapy 3 s.h.
Supervision of Master's-level couple and family therapy students; mentoring supervision received from supervision instructor; assignments reflect requirements for AAMFT Approved Supervisor designation; fulfills didactic requirement for AAMFT Approved Supervisor status. Requirements: enrollment in couple and family therapy program.

PSQF:7404 Seminar in Child and Adolescent Intervention Research 3 s.h.
Review and analysis of pertinent literature and evidenced-based interventions for children and adolescents; focus on review and critical analysis of published outcome studies in areas of childhood and adolescent disorders; examination and critique of effective interventions that have undergone stages 1-3 clinical trials; active discussions of research findings for clinical implications. Prerequisites: PSQF:5262.

PSQF:7434 Practicum in Counseling Psychology 3 s.h.
Supervised practice in counseling services. Prerequisites: PSQF:6223 and PSQF:6225.

PSQF:7437 Internship in School Psychology arr.
Supervised internship for PhD students in school psychology. Requirements: completion of required courses.

PSQF:7450 Practicum in Program Evaluation arr.
Supervised experience in designing and implementing components of program evaluations. Prerequisites: PSQF:5165 or EPLS:5165 or PSQF:6265 or EPLS:6266. Requirements: two courses in program evaluation.

PSQF:7452 Leadership, Consultation, and Supervision 3 s.h.
Overview of intervention modalities other than individual and group therapy, especially those that pertain to leadership within organizations, consultation with organizations and communities, and supervision of the work of others; capstone course in counseling psychology sequence. Prerequisites: PSQF:6225.

PSQF:7453 Advanced Practicum in Counseling Psychology 1-3 s.h.
Supervised work in counseling services. Prerequisites: PSQF:7434.

PSQF:7455 Generalizability Theory 3 s.h.
Analysis of variance methods applied to estimation of components of various types of measurement error variance; basic concepts, mathematical foundations, models, assumptions, designs, applications; relationships with other measurement theories. Prerequisites: PSQF:6246 and PSQF:6258.

PSQF:7457 Advanced Group Leadership Experience 3 s.h.
Practice working in a psychotherapy group; students review major theories on group psychotherapy processes and integrate empirical research on effectiveness of group work; multicultural considerations in group psychotherapy; didactic and experiential format.

PSQF:7458 Internship in Counseling Psychology arr.
Supervised work in internship setting. Prerequisites: PSQF:7434 and PSQF:7453. Requirements: PhD standing in counseling psychology and completion of all requirements except dissertation.

PSQF:7459 Seminar: Issues and Trends in Counseling Research 4 s.h.
Recent trends, including debates and findings in literature related to best practices for the profession. Same as CSED:7458.

PSQF:7460 Seminar: Research in Counseling 3 s.h.
Methods, examples, ethics, multicultural issues, problems of counseling research. Requirements: PhD enrollment. Same as CSED:7460.

PSQF:7465 Issues and Ethics in Professional Psychology 3 s.h.
Professional ethics; issues in professional practice of psychology.

PSQF:7470 Internship and Professional Issues 3 s.h.
Professional growth as clinician, internship application and interview processes, next steps in professional career, professional issues, interpersonal and counseling/professional competence, and goals for internship.

PSQF:7476 Research in Educational Measurement and Statistics 3 s.h.
Opportunity to learn and discuss psychometric and statistical theories and methodologies not covered in regular courses; critical concepts and skills necessary to conduct psychometric and statistical research; for motivated students interested in conducting their own research in educational measurement and statistics. Prerequisites: PSQF:6243 and (PSQF:6258 or PSQF:6262).

PSQF:7493 PhD Thesis in Psychological and Quantitative Foundations arr.

PSQF:7500 Advanced Practical Experience in Couple and Family Therapy 1-3 s.h.
Supervised experience in professional couple and family therapy; clinical or academic field placement and seminar; required for couple and family therapy students. Requirements: successful completion of couple and family therapy program comprehensive examination.

PSQF:7604 Scholarly Integrity and Responsible Conduct of Educational Research and Evaluation for Postdocs 0 s.h.
Students are introduced to and deepen their knowledge and skills in applying principles for the responsible conduct of educational research and evaluation and related social sciences; two modules addressing core areas identified by federal policy as minimal requirements for knowledge and skill in practice of research with scholarly integrity; format is discovery and discussion—presentation of background information for each topic is followed by discussion of case studies and other examples relevant to each topic; for postdoc associates.