

Psychological and Quantitative Foundations, PhD

Programs designed to lead to professional licensure are subject to federal regulations regarding informational disclosures. Please see Professional Licensure Disclosures by Program for further information.

Learning Outcomes

Graduate students will:

- gain course-specific knowledge and skills as required to perform well in their specialties (as demonstrated by completing their required courses in their specialty/major area with a grade-point average of 3.00 or higher);
- demonstrate integrated substantive knowledge and skills that can be applied to solve novel professional-level problems (as demonstrated by completing their comprehensive examinations satisfactorily and by completing their thesis proposals with committee approval);
- demonstrate required clinical practice skills and researcher autonomy (as demonstrated by satisfactory completion of all required practicums and/or internships, and required thesis defenses/article submissions as appropriate for their degrees);
- demonstrate initial engagement with, and commitment to, professional ethics, professional development, lifelong learning, and service to the profession (as demonstrated by participation and engagement in the appropriate state, regional, and national organizations as appropriate for their degrees);
- demonstrate entry-level professional qualifications (as demonstrated by being qualified to take any licensing exams that are required for practice and/or employment); and
- be qualified for suitable employment or postdoctoral appointments upon graduation (as reported on annual Qualtrics surveys).

Counseling Psychology

The Doctor of Philosophy program in psychological and quantitative foundations with a counseling psychology subprogram requires a minimum of 100 s.h. of graduate credit. The program requires full-time study. Students are expected to maintain a UI cumulative grade-point average (GPA) of at least 3.00.

The goal of the program is to prepare counseling psychologists who will promote psychology as a science and contribute to the advancement of the profession. The faculty endorses a scientist/practitioner model of training and expects students to become competent researchers and proficient practitioners. Graduates find positions in a variety of settings, including higher education, counseling centers, clinics, private practice settings, and hospitals.

The program is fully accredited by the American Psychological Association. Students must show appropriate levels of emotional balance and interpersonal skills and act within the American Psychological Association's *Ethical Principles*

of Psychologists. For more information, contact the program director.

The PhD in psychological and quantitative foundations with a counseling psychology subprogram requires the following coursework.

Research Requirements

16 s.h. of research courses are required. Students must take at least one course in psychometrics, two quantitative courses, one qualitative course, and six semesters of the supervised research course as follows.

| Course # | Title | Hours |
|----------------|---|-------|
| These courses: | | |
| PSQF:5900 | Psychometrics | 1-3 |
| PSQF:6243 | Intermediate Statistical Methods (required if will take PSQF:6244 or PSQF:6246 below) | 3 |
| PSQF:7394 | Supervised Research in Counseling Psychology (taken six semesters for 1 s.h. each) | 6 |
| One of these: | | |
| PSQF:7331 | Qualitative Educational Research Methods | 3 |
| CSED:7338 | Essentials of Qualitative Inquiry | 3 |
| EDTL:7070 | Qualitative Research Methods in Teaching and Learning | 3 |
| EPLS:7373 | Qualitative Research Design and Methods | 3 |
| One of these: | | |
| PSQF:6244 | Correlation and Regression (must take PSQF:6243 before this course) | 4 |
| PSQF:6246 | Design of Experiments (must take PSQF:6243 before this course) | 3 |
| PSQF:6252 | Introduction to Multivariate Statistical Methods | 3 |
| PSQF:6270 | Generalized Linear Models | 3 |
| PSQF:7201 | Counseling Psychology Research Writing | 3 |

Qualitative and quantitative methodology is discussed in PSQF:7394 Supervised Research in Counseling Psychology, which is directed each semester by faculty advisors. Research from each student is discussed and evaluated, critiqued, and supported.

Discipline-Specific Knowledge

All students are required to have a thorough grounding in the basic discipline of psychology. This may be achieved through a minimum of 3 s.h. of credit in each of the following four areas: biological bases of behavior, cognitive-affective bases of behavior, social bases of behavior, and history and systems.

Counseling Psychology Core

| Course # | Title | Hours |
|-----------|--|-------|
| PSQF:6223 | Introduction to Counseling Psychology Practice/ Research I | 3 |
| PSQF:6225 | Introduction to Counseling Psychology Practice, Research, and Theory | 3 |
| PSQF:6235 | Multicultural Counseling | 3 |
| PSQF:6312 | Psychopathology Across the Lifespan | 3 |
| PSQF:7306 | Psychotherapy III: Work Psychology and Career Interventions | 3 |
| PSQF:7309 | Personality Assessment | 3 |
| PSQF:7310 | Intelligence Assessment | 3 |
| PSQF:7356 | Process and Outcomes in Counseling Psychotherapy | 3 |
| PSQF:7365 | Theories of Psychotherapy | 3 |
| PSQF:7434 | Practicum in Counseling Psychology | 3 |
| PSQF:7452 | Leadership, Consultation, and Supervision | 3 |
| PSQF:7453 | Advanced Practicum in Counseling Psychology (repeatable) | 3 |
| PSQF:7457 | Advanced Group Leadership Experience | 3 |
| PSQF:7465 | Issues and Ethics in Professional Psychology | 3 |
| PSQF:7470 | Internship and Professional Issues | 3 |

Students must enroll in practica to reach a specified level of client contact, supervision, and additional experience hours. Practicum placements must have prior approval of the counseling psychology faculty. Students must successfully complete one semester of PSQF:7434 Practicum in Counseling Psychology before enrolling in PSQF:7453 Advanced Practicum in Counseling Psychology.

Electives

Elective courses are determined in collaboration with the major advisor.

Internship

Students spend a calendar year in an internship setting approved by the counseling psychology faculty. The faculty determines student readiness to apply for the internship based on completion of all required coursework, successful defense of comprehensive exams, and successful completion of practicum requirements. Internships usually require geographic relocation.

Comprehensive Exam and Dissertation

The comprehensive examination consists of an oral and a written component. The exam includes research and practice elements. For more information, contact the program coordinator.

The dissertation research study is planned in collaboration with the student's major advisor. Dissertation credit ranges from 12 to 15 s.h.

Admission

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations on the Graduate College website. Preference is given to applicants who have an undergraduate GPA above 3.00 and a graduate GPA above 3.50; an undergraduate major, minor, or substantial coursework in psychology; and previous research and counseling experience.

The faculty encourages applicants from a wide range of backgrounds and identities. Applicants with a BA or a more advanced degree are eligible to apply.

Educational Measurement and Statistics

The Doctor of Philosophy program in psychological and quantitative foundations with an educational measurement and statistics subprogram requires a minimum of 90 s.h. of graduate credit. Students must maintain a UI cumulative grade-point average of at least 3.00 to remain in good standing in the Graduate College.

The subprogram prepares students for senior professional positions in educational measurement and statistics including quantitative methods, psychometrics, and data analytics. Graduates find employment in higher education, state and federal agencies, not-for-profit and commercial testing organizations, large public and private school systems, educational technology, and research institutions. Many students complete research internships with prospective employers during their second or third year of graduate study.

The doctorate is a U.S. Department of Homeland Security STEM-designated degree program in educational statistics and research methodology, recognized as such in the U.S. Department of Education's Classification of Instructional Programs (CIP code 13.0603) due to its focus on research, innovation, and the development of new technologies in testing and psychometric methods.

Students who enter the subprogram without an MA thesis must complete a substitute project before taking the PhD comprehensive examination.

The PhD in Psychological and Quantitative Foundations with an educational measurement and statistics subprogram requires the following coursework.

Required Courses

During the first year of graduate study, a student and their advisor plan a program of study that is appropriate for the student's interests and vocational objectives. The doctorate involves advanced work in educational measurement and psychometrics, quantitative methods, research design, and related areas. Work in other University of Iowa departments that is consistent with the student's interests is encouraged. Many doctoral candidates also complete graduate certificates, minors, and secondary degrees during their graduate studies.

Educational Measurement

| Course # | Title | Hours |
|---------------|--|-------|
| All of these: | | |
| PSQF:6255 | Construction and Use of Evaluation Instruments | 3 |

| | | |
|------------------------|--|---|
| PSQF:6257 | Educational Measurement and Evaluation | 3 |
| PSQF:6258 | Theory and Technique in Educational Measurement | 3 |
| PSQF:6262 | Item Response Theory | 3 |
| PSQF:7358 | Equating and Scaling of Educational Tests | 3 |
| At least two of these: | | |
| PSQF:6249 | Factor Analysis and Structural Equation Models | 3 |
| PSQF:6259 | Scaling Methods | 3 |
| PSQF:6260 | Diagnostic Assessment | 3 |
| PSQF:7355 | Seminar: Educational Measurement and Evaluation | 3 |
| PSQF:7375 | Topics in Educational Measurement and Statistics | 3 |
| PSQF:7455 | Generalizability Theory | 3 |
| PSQF:7476 | Research in Educational Measurement and Statistics | 3 |

Applied Statistics

| Course # | Title | Hours |
|--------------------------|--|-------|
| All of these: | | |
| PSQF:6243 | Intermediate Statistical Methods | 3 |
| PSQF:6246 | Design of Experiments | 3 |
| PSQF:6252 | Introduction to Multivariate Statistical Methods | 3 |
| PSQF:6270 | Generalized Linear Models | 3 |
| At least three of these: | | |
| PSQF:6244 | Correlation and Regression | 4 |
| PSQF:6247 | Nonparametric Statistical Methods | 3 |
| PSQF:6248 | Research Synthesis and Meta-Analysis | 3 |
| PSQF:6249 | Factor Analysis and Structural Equation Models | 3 |
| PSQF:6250 | Computer Packages for Statistical Analysis | 3 |
| PSQF:6254 | Causal Inference and Observational Designs | 3 |
| PSQF:6271 | Longitudinal Multilevel Models | 3 |
| PSQF:6272 | Clustered Multilevel Models | 3 |
| PSQF:7355 | Seminar: Educational Measurement and Evaluation | 3 |
| PSQF:7375 | Topics in Educational Measurement and Statistics | 3 |
| PSQF:7476 | Research in Educational Measurement and Statistics | 3 |

Additional Research Requirements

The College of Education research requirements may be satisfied by 9 s.h. from the required courses in educational measurement and applied statistics, by completing PSQF:6220 Quantitative Educational Research Methodologies and PSQF:7331 Qualitative Educational Research Methods, or by completing two other courses comparable in content coverage and level of rigor with departmental approval.

Third Area of Concentration

Students are required to complete a minimum of 9 s.h. in a coherent program of coursework outside of educational measurement and statistics that is beyond the courses listed above. The third area of concentration may come from related disciplines such as mathematical statistics, biostatistics, computer science, curriculum, higher education, program evaluation, learning sciences, data science, or informatics. These must be graduate-level courses that are consistent with a plan approved by the student's advisor.

Electives

Students are encouraged to take elective courses that complement their interests. These electives, chosen in collaboration with the academic advisor, may include courses in related areas such as psychology, learning sciences, mathematical statistics, informatics, or data science. All students are expected to develop proficiency in computer programming methods sufficient to support their research and professional objectives.

Comprehensive Examination

After completing most of their coursework, students take the comprehensive examination. The comprehensive examination is not a deferred qualifying examination. Rather, it is intended to evaluate a student's mastery of the concepts from the program of study at or near the end of the student's formal preparation and before completion of the dissertation. The composition of the comprehensive examination committee and the requirements to pass the comprehensive exam must follow the College of Education and Graduate College guidelines.

During the comprehensive exam, the committee seeks further evidence of the student's independent command of concepts across their program of study. The comprehensive examination consists of a written component followed by an oral component.

The details and format of the written and oral components of the exam are determined by the comprehensive examination committee to ensure that the exam represents the student's own work. The written component may include a traditional examination (in-person or take-home) or an extended research activity. The oral component is satisfied by a meeting of the examination committee with the student. At the conclusion of the oral component, the examining committee makes a single decision (satisfactory, with reservations, or unsatisfactory) across all aspects of the examination.

Dissertation

Work for the PhD concludes with the dissertation. The dissertation research study is planned in collaboration with the student's examining committee chair and members and includes a proposal meeting and a final examination. Committee members approve both the examination and the final document submitted by the student. A student must complete a minimum of 9 s.h. of dissertation credit, and no more than 12 s.h. may count towards the 90 s.h. that is required for the doctorate. Students may register for additional dissertation credit hours until completed.

Admission

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations

on the Graduate College website. Preference is given to applicants who have an undergraduate GPA above 3.00 and a graduate GPA above 3.50.

The faculty encourages applicants from a wide range of backgrounds and identities. Applicants with a BA/BS or a more advanced degree are eligible to apply.

Learning Sciences and Educational Psychology

The Doctor of Philosophy program in psychological and quantitative foundations with a learning sciences and educational psychology subprogram requires a minimum of 72 s.h. of graduate credit. Students are expected to maintain a UI cumulative grade-point average of at least 3.00.

The subprogram synthesizes core content and methods of educational psychology with training in the learning sciences. Educational psychology is characterized by empirical research and theory typical of the social and behavioral sciences. The learning sciences reflect an outgrowth of cognitive science. The field offers a multidisciplinary approach to understanding when, how, and why people learn in social and material contexts that include but are not limited to classrooms. The learning sciences blend theories and methods from several disciplines, such as cognitive psychology, anthropology, instructional design, and more. Students will acquire the depth of knowledge and methodological sophistication necessary for original research that contributes to educational psychology and the learning sciences. They will develop and demonstrate their knowledge of learning theory and design principles in the context of research and design projects.

Students work closely with their advisor to develop a plan of study and define a program that matches their goals and interests. Those who begin the program after earning a master's degree or with coursework from another program may be able to waive some of the PhD program requirements.

The program of study includes substantive areas within the learning sciences and educational psychology, including courses in cognition, development, learning theory, and the design of instruction, learning environments, and learning technologies. Other learning opportunities include a design project in the second year, a precandidacy independent research project in which students design and carry out original research, a slate of research courses that meet the College of Education's research requirements, a minor area of a student's choice, and a dissertation in the student's area of interest.

Research Requirement

The heart of the learning sciences and educational psychology as fields of inquiry is the creation, dissemination, and use of rigorous research to better understand and address educational issues. While many of the required courses address various aspects of the guiding principles set out by the National Research Council, students engage in the following coursework and research-related activities.

| Course # | Title | Hours |
|---------------|---|-------|
| All of these: | | |
| PSQF:6220 | Quantitative Educational Research Methodologies | 3 |
| PSQF:6243 | Intermediate Statistical Methods | 3 |

| | | |
|---------------|--|---|
| PSQF:7331 | Qualitative Educational Research Methods | 3 |
| One of these: | | |
| PSQF:6244 | Correlation and Regression | 4 |
| PSQF:6246 | Design of Experiments | 3 |
| PSQF:6247 | Nonparametric Statistical Methods | 3 |
| PSQF:6252 | Introduction to Multivariate Statistical Methods | 3 |

Research Project

Prior to candidacy and in consultation with a faculty member, students design, implement, and present an original research project. This experience provides the opportunity to conduct a pilot study that will strengthen their thesis in terms of methods, instruments, theoretical grounding, or focus of a research question. Student presentations of their research are open to the public. Students are encouraged to submit their study results for broader dissemination at a local, regional, or national conference.

For students who have received approval to omit this requirement because of an empirical thesis that is acceptable to the learning sciences and educational psychology faculty, an additional research course may be required.

| Course # | Title | Hours |
|-----------|------------------------------------|-------|
| PSQF:6230 | Research in Educational Psychology | 3 |

Required Courses

| Course # | Title | Hours |
|---------------|--|-------|
| All of these: | | |
| PSQF:6200 | Educational Psychology | 3 |
| PSQF:6203 | Tools and External Representations in Individual and Social Learning | 3 |
| PSQF:6204 | Foundations of the Learning Sciences | 3 |
| PSQF:6205 | Design of Instruction | 3 |
| PSQF:6214 | Design of Learning Environments: Theory, Practice, and Method | 3 |
| PSQF:6281 | Cognitive Theories of Learning | 3 |
| PSQF:6299 | MA Project: Portfolio/ Internship/Practicum | 2 |
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations (minimum requirement) | 10 |

Core Courses

The selection of core courses depends on a student's area of specialization. Students choose at least 9 s.h.; they should contact their advisor for additional approved courses.

Cognition, Learning, and Development

| Course # | Title | Hours |
|-----------|-------------------------------|-------|
| PSQF:6213 | Advanced Lifespan Development | 3 |

| | | |
|-----------|--|---|
| PSQF:6275 | Constructivism and Design of Instruction | 3 |
| PSY:6440 | Developmental Cognitive Neuroscience | 3 |

Learning in the Disciplines

| Course # | Title | Hours |
|-----------|---|-------|
| EDTL:6267 | Seminar: Current Issues in Art Education | 3 |
| EDTL:6315 | MA Seminar: English Education | 3 |
| EDTL:6483 | Multilingual Education and Applied Linguistics | 3 |
| EDTL:6570 | Foundation of School STEM Curriculum | 3 |
| EDTL:6757 | Learning in the Science Classroom | 3 |
| EDTL:6758 | Writing in the Science Classroom | 3 |
| EDTL:6833 | History and Foundations of Social Studies Education | 3 |

Technology and Media

| Course # | Title | Hours |
|-----------|---|-------|
| PSQF:6208 | Digital Media and Learning | 3 |
| PSQF:6211 | Universal Design and Accessibility for Online Instruction | 3 |
| PSQF:6215 | Online Instruction: Design and Facilitation | 3 |
| PSQF:6216 | Tools and Utilities for Online Teaching | 3 |

Seminar

| Course # | Title | Hours |
|-----------|---|-------|
| PSQF:7371 | Seminar in Learning Sciences and Educational Psychology (topics vary; may be repeated if content is related to the learning sciences or educational psychology) | 3 |

Electives

Students may take up to 6 s.h. of elective coursework. Students can take PSQF:6217 Seminar in College Teaching and/or additional research courses. Other courses may be included in consultation with their advisor.

Minor Area

Students must complete a minimum of 12 s.h. that constitute a coherent program of coursework outside educational psychology and beyond the courses previously listed. The minor area may be from a foundation discipline such as mathematics education, educational philosophy, or program evaluation. Courses must be numbered 5000 or above, can span across departments and colleges, and must be consistent with a plan approved by a student's advisor.

Comprehensive Examination

The PhD comprehensive examination emphasizes competence and depth in one or more narrowly defined areas of

research and theory. Students choose from three options in consultation with their advisor and with the approval of their examining committee, which is composed of four faculty members. It does not necessarily include the same faculty members as the dissertation committee.

The options are a traditional comprehensive examination that includes foundational content in educational psychology and learning sciences, the student's minor area, and a specialty area of the student's choice; a review article; or an extended research activity. For details of each option's requirements, contact the Department of Psychological and Quantitative Foundations.

Admission

Applicants must meet the admission requirements of the Graduate College, including the minimum grade-point average; see the Manual of Rules and Regulations on the Graduate College website.

Applicants who do not meet all admission requirements may be granted conditional admission on the basis of other evidence, such as high grade-point average, strong academic preparation, and highly supportive recommendations. Conditional admission is rare.

Following an initial review of the application, applicants may be asked to participate in a virtual interview with one or more faculty members. No preparation is required for this interview, it provides faculty members an opportunity to better understand the applicant's graduate school goals and provides applicants with an opportunity to ask questions about the program.

Applicants who accept admission or financial aid and do not relinquish either one on or before April 15 may not solicit or accept another offer. Offers made by the program after April 15 include the provision that the offer is void if the applicant has accepted and continues to hold a previous offer from another program listed in the American Psychological Association publication *Graduate Study in Psychology and Associated Fields*. This policy is consistent with standards set by the association's Board of Educational Affairs.

School Psychology

The Doctor of Philosophy program in psychological and quantitative foundations with a school psychology subprogram requires a minimum of 108 s.h. of graduate credit. Students are expected to maintain a UI cumulative grade-point average (GPA) of at least 3.00.

The primary mission of the school psychology program is to train health service psychologists to be outstanding ethical and multiculturally competent scientist-practitioners who promote psychology as a profession and science for the betterment of the human condition. As such, the program places significant emphasis on instilling attitudes and skills that are necessary for becoming critical consumers of research, active disseminators of research, and valuable contributors to the scientific foundations of the field. Students must show appropriate levels of emotional balance and interpersonal skills, and act within the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct.

Graduates from the school psychology program obtain positions as school service providers, private practitioners, faculty members, and psychologists in community mental

health agencies, residential settings, and pediatric and psychiatric settings.

The APA Commission on Accreditation (APA-CoA) approved the school psychology program's intent to apply application and voted to provide public notice of the program's intent to seek accreditation effective April 2, 2022. Although currently not APA accredited, the doctoral program has developed its course offerings, sequence, research, and practical experiences to be in line with standards that are set forth by the Standards of Accreditation for Health Service Psychology. The doctoral-level school psychology program applied for accreditation on contingency in September 2023.

Students develop a plan of study in consultation with their academic advisors. Successful completion of the PRAXIS II—School Psychology subject test 5403 is required for program completion.

The PhD in psychological and quantitative foundations with a school psychology subprogram requires the following coursework.

Research Requirement

To receive credit for additional courses, students must obtain prior approval from their advisor and the school psychology program.

| Course # | Title | Hours |
|-------------------------------|---|-------|
| All of these: | | |
| PSQF:5199 | Topical Workshop in Psychological and Quantitative Foundations (when topic is introduction to school psychology research writing) | 1 |
| PSQF:5900 | Psychometrics | 1 |
| PSQF:6243 | Intermediate Statistical Methods | 3 |
| PSQF:7331 | Qualitative Educational Research Methods | 3 |
| or EPLS:7373 | Qualitative Research Design and Methods | |
| PSQF:7342 | Research Project in School Psychology | 2-4 |
| EDTL:7953 | Seminar: Single Subject Design Research | 3 |
| One of these (or equivalent): | | |
| PSQF:6244 | Correlation and Regression (must take PSQF:6243 before this course) | 4 |
| PSQF:6246 | Design of Experiments (must take PSQF:6243 before this course) | 3 |

Basic Psychology

Students are required to have a thorough grounding in the basic discipline of psychology, which may be achieved through earning a minimum of 3 s.h. in each of the following six areas: history and systems; and affective, biological, cognitive, developmental, and social bases of behavior. Students complete additional courses in individual differences and other course areas consistent with accreditation.

Core Courses

| Course # | Title | Hours |
|--------------------------------|---|-------|
| All of these (or equivalents): | | |
| PSQF:5219 | Foundations of Health Service/School Psychology | 3 |
| PSQF:6213 | Advanced Lifespan Development | 3 |
| PSQF:6235 | Multicultural Counseling | 3 |
| PSQF:6238 | Assessment of Learning Differences | 3 |
| PSQF:6263 | Consultation Theory and Practice | 3 |
| PSQF:6281 | Cognitive Theories of Learning | 3 |
| PSQF:6312 | Psychopathology Across the Lifespan | 3 |
| PSQF:7320 | History and Systems of Psychology | 3 |
| PSQF:7237 | Beginning Practicum in School Psychological Service (minimum of 150 hours required) | 3 |
| PSQF:7310 | Intelligence Assessment | 3 |
| PSQF:7315 | Social and Emotional Assessment of Children and Adolescents | 3 |
| PSQF:7337 | Advanced Practicum in School Psychology (minimum of 750 hours required) | 15 |
| PSQF:7344 | Academic Interventions | 3 |
| PSQF:7367 | Social Psychology and Social Systems | 3 |
| PSQF:7390 | Supervision of School Psychology Practicum/ Internship | 3 |
| PSQF:7465 | Issues and Ethics in Professional Psychology | 3 |
| or EDTL:5963 | Ethics and Professional Conduct for Behavior Analysts and Psychologists | |
| CSED:5202 | Introduction to Group Counseling | 3 |
| or CSED:5222 | Counseling Children and Adolescents in Schools | |
| EDTL:4900 | Foundations of Special Education | 3 |
| EDTL:4950 | Behavioral and Social Interventions | 3 |
| EDTL:5961 | Foundation of Applied Behavior Analysis | 3 |
| EPLS:4180 | Human Relations for the Classroom Teacher | 3 |
| PSY:5203 | Fundamental Neurobiology I | 3 |
| or PSY:6370 | Principles of Neuropsychology | |

Students must enroll in practicums to reach a specified level of client contact, supervision, and additional experience hours. Placements must have prior approval of the school psychology faculty. Students must successfully complete one semester of PSQF:7237 Beginning Practicum in School Psychological Service before enrolling in PSQF:7337 Advanced Practicum in School Psychology. Students must adhere to the

most recent ethical principles and standards of the American Psychological Association.

Elective Courses

Students earn a minimum of 6 s.h. in elective courses. These courses are determined in collaboration with the major advisor and can include the following.

| Course # | Title | Hours |
|-----------|--|-------|
| PSQF:6217 | Seminar in College Teaching | 1-3 |
| EDTL:4975 | Explicit Instruction | 3 |
| EDTL:5966 | Advanced Topics in Applied Behavior Analysis | 3 |
| PEDS:7264 | Clinical Applications of Applied Behavior Analysis | 3 |

Yearly and Comprehensive Portfolios

Students are required to complete yearly portfolio reviews, which include oral examinations. The comprehensive portfolio consists of an oral and a written component that includes research and practice elements. For more information, contact the program coordinator.

Internship

Students spend a calendar year in an internship setting approved by the school psychology faculty. The faculty determines students' readiness to apply for internships based on their completion of all required coursework and successful completion of practicum and program requirements. Internships may require geographic relocation.

| Course # | Title | Hours |
|--------------|---------------------------------|-------|
| This course: | | |
| PSQF:7437 | Internship in School Psychology | 2 |

Dissertation

Students complete a doctoral dissertation. The program has adopted a two-article format. Article 1 (PSQF:7342) is completed by the end of the third year of the program. Following the successful defense of Article 1, students register for a total of 6 s.h. of dissertation credit (Article 2, PSQF:7493). All dissertation research studies are planned in collaboration with a student's major research advisor. Students may register for additional dissertation credits until completion.

| Course # | Title | Hours |
|--------------|--|-------|
| This course: | | |
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 6 |

Admission

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations on the Graduate College website. Preference is given to applicants with an undergraduate major in psychology, education, or a related field; have an undergraduate GPA of 3.00 or higher; a graduate GPA of 3.00 or higher; related research experience; and an interest and experience working with children and adolescents in K-12 settings. Applicants are reviewed holistically.

The faculty encourages applicants from minoritized and other underrepresented groups to include persons from a wide range of backgrounds and academic preparation.

Academic Plans

Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Psychological and Quantitative Foundations, PhD

- Counseling Psychology Subprogram [p. 7]
- Educational Measurement and Statistics Subprogram [p. 8]
- Learning Sciences and Educational Psychology Subprogram [p. 9]
- School Psychology Subprogram [p. 10]

Counseling Psychology Subprogram

| Course | Title | Hours |
|------------------------|-------|-------|
| Academic Career | | |
| Any Semester | | |

100 s.h. must be graduate level coursework; graduate transfer credits allowed upon approval. More information is included in the General Catalog and on department website.^{a, b}

| Hours | | 0 |
|--|---|-----------|
| First Year | | |
| Fall | | |
| PSQF:6312 or PSY:5410 | Psychopathology Across the Lifespan ^c or Proseminar in Developmental Science | 3 |
| PSQF:6225 | Introduction to Counseling Psychology Practice, Research, and Theory | 3 |
| PSQF:6243 | Intermediate Statistical Methods | 3 |
| PSQF:7394 | Supervised Research in Counseling Psychology | 1 |
| PSQF:7457 | Advanced Group Leadership Experience | 3 |
| Hours | | 13 |
| Spring | | |
| PSQF:6223 | Introduction to Counseling Psychology Practice/Research I | 3 |
| PSQF:7310 | Intelligence Assessment | 3 |
| PSQF:7365 | Theories of Psychotherapy | 3 |
| SOC:6210 or PSQF:7367 | Contemporary Approaches to Social Psychology ^c or Social Psychology and Social Systems | 3 |
| PSQF:7394 | Supervised Research in Counseling Psychology | 1 |
| Quantitative statistics/research methodology course ^d | | 3 |
| Hours | | 16 |

| | | |
|--|---|-----------|
| Summer | | |
| PSQF:5900 | Psychometrics ^e | 1 |
| Hours | | 1 |
| Second Year | | |
| Fall | | |
| PSQF:7306 | Psychotherapy III: Work Psychology and Career Interventions | 3 |
| PSQF:7394 | Supervised Research in Counseling Psychology | 1 |
| PSQF:7434 | Practicum in Counseling Psychology | 3 |
| PSQF:7465 | Issues and Ethics in Professional Psychology | 3 |
| PSY:6440 or PSY:6370 | Developmental Cognitive Neuroscience ^c or Principles of Neuropsychology | 3 |
| Hours | | 13 |
| Spring | | |
| PSQF:6235 | Multicultural Counseling | 3 |
| PSQF:7356 | Process and Outcomes in Counseling Psychotherapy | 3 |
| PSQF:7394 | Supervised Research in Counseling Psychology | 1 |
| PSQF:7453 | Advanced Practicum in Counseling Psychology | 3 |
| Qualitative research course ^f | | 3 |
| Hours | | 13 |
| Third Year | | |
| Fall | | |
| PSQF:7320 | History and Systems of Psychology ^c | 3 |
| PSQF:7394 | Supervised Research in Counseling Psychology | 1 |
| PSQF:7453 | Advanced Practicum in Counseling Psychology | 3 |
| PSY:5610 or PSY:6230 or PSQF:6200 | Proseminar in Cognition and Perception ^c or Foundations of Learning, Memory, and Cognition or Educational Psychology | 3 |
| Elective course | | 3 |
| Hours | | 13 |
| Spring | | |
| Exam: Doctoral Comprehensive Exam ^g | | |
| PSQF:7309 | Personality Assessment | 3 |
| PSQF:7394 | Supervised Research in Counseling Psychology | 1 |
| PSQF:7452 | Leadership, Consultation, and Supervision | 3 |
| PSQF:7453 | Advanced Practicum in Counseling Psychology | 3 |
| Elective course | | 3 |
| Hours | | 13 |
| Fourth Year | | |
| Fall | | |
| Apply for Internship | | |
| PSQF:7453 | Advanced Practicum in Counseling Psychology | 3 |

| | | |
|--|--|------------|
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 6 |
| Hours | | 9 |
| Spring | | |
| PSQF:7453 | Advanced Practicum in Counseling Psychology | 3 |
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 6 |
| Exam: Doctoral Final Exam ^h | | |
| Hours | | 9 |
| Fifth Year | | |
| Any Semester | | |
| Internship Year ^{i, j} | | |
| PSQF:7470 | Internship and Professional Issues | 3 |
| Hours | | 3 |
| Total Hours | | 103 |

- a Students entering with a bachelor's degree must work with their faculty advisor to complete 30 s.h. of appropriate graduate coursework to fulfill the MA requirements. Students entering with a master's degree from Iowa or an accredited institution with fewer than 30 s.h. of coursework must work with their faculty advisor to complete the needed appropriate graduate coursework to fulfill the MA requirements.
- b Students must complete specific requirements in the University of Iowa Graduate College after program admission. Refer to the Graduate College website and the Manual of Rules and Regulations for more information.
- c Satisfies a Discipline-Specific Knowledge area requirement. Must be completed before taking the comprehensive exam.
- d Choose one course from PSQF:6244, PSQF:6246, PSQF:6252, PSQF:6270, PSQF:7201.
- e Course may be taken during any summer session.
- f Choose one course from PSQF:7331, CSED:7338, EDTL:7070, EPLS:7373.
- g Consists of oral and written components; includes research and practice elements. For more information contact the program coordinator.
- h Dissertation defense.
- i For students who have already successfully defended their dissertation.
- j Students spend a calendar year in an internship setting approved by the counseling psychology faculty. The faculty determines student readiness to apply for the internship based on completion of all required coursework, successful defense of comprehensive exams, and successful completion of practicum requirements. Internships usually require geographic relocation.

Educational Measurement and Statistics Subprogram

| Course | Title | Hours |
|---|-------|----------|
| Academic Career | | |
| Any Semester | | |
| 90 s.h. must be graduate level coursework; graduate transfer credits allowed upon approval. More information is included in the General Catalog and on department website. ^a | | |
| Hours | | 0 |

First Year**Fall**

| | | |
|--------------|--|-----------|
| PSQF:6243 | Intermediate Statistical Methods | 3 |
| PSQF:6225 | Introduction to Counseling Psychology Practice, Research, and Theory | 3 |
| PSQF:6257 | Educational Measurement and Evaluation | 3 |
| PSQF:6270 | Generalized Linear Models | 3 |
| Hours | | 12 |

Spring

| | | |
|--|---|-----------|
| PSQF:6258 | Theory and Technique in Educational Measurement | 3 |
| PSQF:6262 | Item Response Theory | 3 |
| Applied statistics elective course ^b | | 3 |
| Educational measurement elective course ^b | | 3 |
| Hours | | 12 |

Second Year**Fall**

| | | |
|--|---|-----------|
| PSQF:6246 | Design of Experiments | 3 |
| PSQF:7358 | Equating and Scaling of Educational Tests | 3 |
| Applied statistics elective course ^b | | 3 |
| Third area of concentration elective course ^c | | 3 |
| Hours | | 12 |

Spring

| | | |
|--|--|-----------|
| PSQF:6252 | Introduction to Multivariate Statistical Methods | 3 |
| PSQF:6255 | Construction and Use of Evaluation Instruments | 3 |
| Applied statistics elective course ^b | | 3 |
| Third area of concentration elective course ^c | | 3 |
| Hours | | 12 |

Third Year**Any Semester**

| | | |
|--|--|----------|
| Exam: Doctoral Comprehensive Exam ^d | | |
| Hours | | 0 |

Fall

| | | |
|--|--|-----------|
| Educational measurement elective course ^b | | 3 |
| Third area of concentration elective course ^c | | 3 |
| Elective course ^e | | 3 |
| Elective course ^e | | 3 |
| Hours | | 12 |

Spring

| | | |
|------------------------------|--|-----------|
| Elective course ^e | | 3 |
| Elective course ^e | | 3 |
| Elective course ^e | | 3 |
| Elective course ^e | | 3 |
| Hours | | 12 |

Fourth Year**Fall**

| | | |
|------------------------------|--|----------|
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 6 |
| Elective course ^e | | 3 |
| Hours | | 9 |

Spring

| | | |
|-----------|--|---|
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 6 |
|-----------|--|---|

| | |
|--|-----------|
| Elective course ^e | 3 |
| Exam: Doctoral Final Exam ^f | |
| Hours | 9 |
| Total Hours | 90 |

a Students must complete specific requirements in the University of Iowa Graduate College after program admission. Refer to the Graduate College website and the Manual of Rules and Regulations for more information.

b See the General Catalog for list of approved courses.

c Students are required to complete a minimum of 9 s.h. in a coherent program of coursework outside of educational measurement and statistics that is beyond the courses listed above. The third area of concentration may come from related disciplines such as mathematical statistics, biostatistics, computer science, curriculum, higher education, program evaluation, learning sciences, data science, or informatics. These must be graduate level courses that are consistent with a plan approved by the student's advisor.

d After completing most of their coursework, students take the comprehensive examination, which consists of a written component followed by an oral component. The comprehensive examination is not a deferred qualifying examination. Rather, it is intended to evaluate a student's mastery of the concepts from the program of study at or near the end of the student's formal preparation and before completion of the dissertation.

e Work with faculty advisor to determine appropriate graduate level coursework and sequence.

f Dissertation defense.

Learning Sciences and Educational Psychology Subprogram

| Course | Title | Hours |
|---|-------|----------|
| Academic Career | | |
| Any Semester | | |
| 72 s.h. must be graduate level coursework; graduate transfer credits allowed upon approval. More information is included in the General Catalog and on department website. ^a | | |
| Hours | | 0 |

First Year**Fall**

| | | |
|--------------|----------------------------------|----------|
| PSQF:6200 | Educational Psychology | 3 |
| PSQF:6205 | Design of Instruction | 3 |
| PSQF:6243 | Intermediate Statistical Methods | 3 |
| Hours | | 9 |

Spring

| | | |
|--------------------------|--|----------|
| PSQF:6281 | Cognitive Theories of Learning | 3 |
| PSQF:7331 | Qualitative Educational Research Methods | 3 |
| Core course ^b | | 3 |
| Hours | | 9 |

Second Year**Fall**

| | | |
|-----------|---|---|
| PSQF:6204 | Foundations of the Learning Sciences | 3 |
| PSQF:6214 | Design of Learning Environments: Theory, Practice, and Method | 3 |

| | | |
|--|--|-----------|
| PSQF:6299 | MA Project: Portfolio/Internship/ Practicum | 1 |
| Research course ^c | | 3 |
| Hours | | 10 |
| Spring | | |
| PSQF:6203 | Tools and External Representations in Individual and Social Learning | 3 |
| PSQF:6220 | Quantitative Educational Research Methodologies | 3 |
| PSQF:6299 | MA Project: Portfolio/Internship/ Practicum | 1 |
| Core course ^b | | 3 |
| Hours | | 10 |
| Third Year | | |
| Fall | | |
| PSQF:6230 | Research in Educational Psychology | 2 |
| Minor area course ^d | | 3 |
| Minor area course ^d | | 3 |
| Core course ^b | | 3 |
| Hours | | 11 |
| Spring | | |
| Exam: Doctoral Comprehensive Exam ^e | | |
| PSQF:6230 | Research in Educational Psychology | 1 |
| Minor area course ^d | | 3 |
| Minor area course ^d | | 3 |
| Elective course ^b | | 3 |
| Hours | | 10 |
| Fourth Year | | |
| Fall | | |
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 5 |
| Elective course ^b | | 3 |
| Hours | | 8 |
| Spring | | |
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 5 |
| Exam: Doctoral Final Exam ^f | | 5 |
| Hours | | 5 |
| Total Hours | | 72 |

a Students must complete specific requirements in the University of Iowa Graduate College after program admission. Refer to the Graduate College website and the Manual of Rules and Regulations for more information.

b Work with faculty advisor to determine appropriate graduate level coursework and sequence.

c Choose from PSQF:6244, PSQF:6246, PSQF:6247, PSQF:6252.

d Students must complete a minimum of 12 s.h. that constitute a coherent program of coursework outside educational psychology. The minor area courses may be from a foundation discipline such as mathematics education, educational philosophy, or program evaluation. Courses must be numbered 5000 or above, can span across departments and colleges, and must be consistent with a plan approved by a student's advisor.

e Students choose from three options in consultation with their advisor and with the approval of their examining

committee. The options are a traditional comprehensive examination, a review article, or an extended research activity. See the General Catalog and the department website for specifics.

f Dissertation defense.

School Psychology Subprogram

| Course | Title | Hours |
|--|--|-----------|
| Academic Career | | |
| Any Semester | | |
| 108 s.h. must be graduate level coursework; graduate transfer credits allowed upon approval. More information is included in the General Catalog and on department website. ^a | | |
| Graduate College program GPA of at least 3.00 is required. ^b | | |
| Hours | | 0 |
| First Year | | |
| Fall | | |
| PSQF:5219 | Foundations of Health Service/ School Psychology | 3 |
| PSQF:6238 | Assessment of Learning Differences | 3 |
| PSQF:7310 | Intelligence Assessment | 3 |
| PSQF:7315 | Social and Emotional Assessment of Children and Adolescents | 3 |
| Hours | | 12 |
| Spring | | |
| EDTL:4950 | Behavioral and Social Interventions | 3 |
| PSQF:5199 | Topical Workshop in Psychological and Quantitative Foundations | 1 |
| PSQF:6213 | Advanced Lifespan Development | 3 |
| PSQF:7237 | Beginning Practicum in School Psychological Service | 3 |
| PSQF:7344 | Academic Interventions | 3 |
| Hours | | 13 |
| Summer | | |
| EDTL:4900 | Foundations of Special Education ^c | 3 |
| PSQF:5900 | Psychometrics | 1 |
| Hours | | 4 |
| Second Year | | |
| Fall | | |
| EDTL:5963 or PSQF:7465 | Ethics and Professional Conduct for Behavior Analysts and Psychologists ^d or Issues and Ethics in Professional Psychology | 3 |
| EDTL:7953 | Seminar: Single Subject Design Research | 3 |
| PSQF:6312 | Psychopathology Across the Lifespan | 3 |
| PSQF:7337 | Advanced Practicum in School Psychology | 3 |
| PSQF:7342 | Research Project in School Psychology | 1 |
| Hours | | 13 |
| Spring | | |
| PSQF:6235 | Multicultural Counseling | 3 |
| PSQF:6263 | Consultation Theory and Practice | 3 |

| | | |
|--|---|-------------|
| PSQF:6281 | Cognitive Theories of Learning | 3 |
| PSQF:7337 | Advanced Practicum in School Psychology | 3 |
| PSQF:7342 | Research Project in School Psychology | 1 |
| Hours | | 13 |
| Summer | | |
| EPLS:4180 | Human Relations for the Classroom Teacher ^c | 3 |
| Hours | | 3 |
| Third Year | | |
| Fall | | |
| EDTL:5961 | Foundation of Applied Behavior Analysis ^e | 3 |
| PSQF:6243 | Intermediate Statistical Methods | 3 |
| PSQF:7320 | History and Systems of Psychology | 3 |
| PSQF:7337 | Advanced Practicum in School Psychology | 3 |
| Hours | | 12 |
| Spring | | |
| CSED:5222 or CSED:5202 | Counseling Children and Adolescents in Schools or Introduction to Group Counseling | 3 |
| PSQF:7337 | Advanced Practicum in School Psychology | 3 |
| PSQF:7367 | Social Psychology and Social Systems | 3 |
| Elective course ^f | | 3 |
| Hours | | 12 |
| Summer | | |
| PRAXIS Exam ^g | | |
| Hours | | 0 |
| Fourth Year | | |
| Any Semester | | |
| Exam: Doctoral Comprehensive Exam ^h | | |
| Hours | | 0 |
| Fall | | |
| PSQF:6244 or PSQF:6246 | Correlation and Regression or Design of Experiments | 3 - 4 |
| PSQF:7331 or EPLS:7373 | Qualitative Educational Research Methods or Qualitative Research Design and Methods | 3 |
| PSY:5203 or PSY:6370 | Fundamental Neurobiology I or Principles of Neuropsychology | 3 |
| Hours | | 9-10 |
| Spring | | |
| PSQF:7337 | Advanced Practicum in School Psychology | 3 |
| PSQF:7390 | Supervision of School Psychology Practicum/Internship | 3 |
| Elective course ^f | | 3 |
| Hours | | 9 |
| Fifth Year | | |
| Fall | | |
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 3 |
| Hours | | 3 |

| | | |
|--|--|----------------|
| Spring | | |
| PSQF:7493 | PhD Thesis in Psychological and Quantitative Foundations | 3 |
| Hours | | 3 |
| Sixth Year | | |
| Fall | | |
| PSQF:7437 | Internship in School Psychology | 1 |
| Hours | | 1 |
| Spring | | |
| PSQF:7437 | Internship in School Psychology | 1 |
| Exam: Doctoral Final Exam ⁱ | | |
| Hours | | 1 |
| Total Hours | | 108-109 |

- a Students must complete specific requirements in the University of Iowa Graduate College after program admission. Refer to the Graduate College website and the Manual of Rules and Regulations for more information.
- b Graduate College program GPA is comprised of all courses that are approved degree requirements. If a student takes more than the minimum required number of semester hours to complete the degree, but all courses taken are eligible to count toward the degree, those courses will be included in the Graduate College program GPA.
- c Required for Social Psychology Certification in Iowa.
- d Students completing the BCBA Certificate must take EDTL:5963 to meet APA and BCBA ethics requirements.
- e Also meets requirements for BCBA Certificate.
- f Work with faculty advisor to select appropriate elective coursework.
- g Successful completion of the PRAXIS II-School Psychology subject test 5403 is required for program completion.
- h Typically completed by the end of the fourth year; see the College of Education website for specifics.
- i Dissertation defense.