Assessment and Measurement Doctoral Program

Assessment and Measurement Doctoral Program
(540) 568-7132
http://www.jmu.edu/assessment/graduate/PhdOverview.htm

Program Director
Dr. Deborah Bandalos

Application Date
The application date for the fall semester is February 1. All application forms and support materials are due at this time for applicants seeking assistantship funding. Programs may require a criminal history check as part of the final admissions process.

Admission Requirements
- Completion of an advanced degree (M.A./M.S. or Ed.S.) in psychology, education, statistics or a related field.
- General GRE scores (verbal, quantitative and analytic writing).
- Statement of interest in the program and professional goals.
- Three letters of recommendation from professionals familiar with the applicant’s academic work and relevant professional experiences.
- Transcripts from all undergraduate and graduate programs attended.
- A current professional vita or resume.
- Representative samples of professional writing.
- Personal interview.

Mission
The vision of the Doctor of Philosophy program in assessment and measurement at JMU is to establish and maintain a national reputation as a valuable resource in educational outcomes assessment and applied measurement. As such, the program will help meet the growing demand for quality assurance and program accountability. To attain this vision, the mission of the doctoral program is to:
- Provide training for its graduate students that combines rigorous, theory-based course work in assessment and measurement with extensive real-world assessment experiences. This training will
prepare students to address the increasing external pressures for assessment data as well as the need for formative feedback for program development.

- Conduct high-quality scholarship that will significantly advance knowledge in the fields of assessment and applied measurement and promote more effective assessment methods.
- Provide, both for JMU and outside constituencies, valuable service activities that promote effective assessment practice and contribute to the professional well-being of the fields of assessment and measurement.

The focus of the assessment training in the Ph.D. program is on the design of program assessment strategies, identification of appropriate existing and/or construction of new assessment measures/methods, empirical analysis of aggregate data, appropriate use of assessment results, and effective communication of assessment to a variety of audiences. Moreover, with the extensive background in measurement theory provided, the graduates of this Ph.D. program are trained as experts in assessment, enabling them to enter the field equipped with a knowledge base that extends far beyond the pragmatic aspects of implementing assessment strategies. Although the program focuses on applications of assessment and measurement in higher education, students can apply many of the skills and knowledge gained in the program to assessment and measurement in K-12 education as well as to the health care and business sectors. Students are not trained to perform psychological assessment of individuals for clinical diagnostic or therapeutic purposes, as training in this concentration revolves around the design and improvement of methods to measure program effectiveness.

The Ph.D. program in assessment and measurement adheres to a practitioner-scientist, applied model of graduate training, built on a solid theoretical base in scientific psychology. The program integrates selected, major pedagogical foundations of psychology, assessment and applied experience. The training model is further designed to capitalize on the previous educational and professional experiences and training of incoming students to expand, strengthen and supplement these skills.

**Curriculum**

The program for a given student will consist of the 57 required hours plus any additional course work that the program faculty deems is needed to fulfill the foundational course work expectations.

**Assessment and Measurement Doctoral Program Degree Requirements**

Students complete course work in the following areas:

- Foundational graduate course work in psychology
- Research and inferential statistics
- Measurement theory
- Course work in at least two of the following areas: social psychology, cognitive psychology or student development
### Required Courses

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PSYC 604</td>
<td>Computer-Assisted Data Management</td>
<td>3</td>
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<tr>
<td>PSYC 608</td>
<td>Multivariate Statistics</td>
<td>3</td>
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<tr>
<td>PSYC 770</td>
<td>Assessment and Public Policy</td>
<td>3</td>
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<tr>
<td>PSYC 812</td>
<td>Assessment Methods and Instrument Design</td>
<td>3</td>
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<tr>
<td>PSYC 814</td>
<td>Performance Assessment</td>
<td>3</td>
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<tr>
<td>PSYC 816</td>
<td>Classical Test Theory and Generalizability Theory</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 825</td>
<td>Doctoral Seminar (3 occasions; 1 credit hour per offering)</td>
<td>6</td>
</tr>
<tr>
<td>PSYC 855</td>
<td>Assessment and Consultation Practice</td>
<td>3</td>
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<td></td>
<td><strong>Two of the following four courses:</strong></td>
<td>6</td>
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<tr>
<td>PSYC 830</td>
<td>Structural Equation Modeling</td>
<td></td>
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<td>PSYC 832</td>
<td>Item Response Theory</td>
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<td>PSYC 834</td>
<td>Computers and Testing</td>
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<td>PSYC 836</td>
<td>Hierarchical Linear Modeling</td>
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<tr>
<td>Approved Electives</td>
<td>12</td>
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### Required Research Experiences:

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<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>PSYC 879</td>
<td>Doctoral Assessment Practicum</td>
<td>3</td>
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<tr>
<td>PSYC 900</td>
<td>Doctoral Dissertation</td>
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**Total Credit Hours:** 57

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### Course Offerings

#### Psychology

**PSYC 501. Workshop in Psychology.**
1-3 credits.
Designed to provide a study of a particular topic of interest in psychology. Prerequisite: Permission of department head.

**PSYC 515. Basic Counseling Skills.**
3 credits.
A basic counseling skills course designed for human services and mental health professionals without graduate training in counseling and for students from related disciplines who wish to acquire counseling skills.

**PSYC 525. Role and Function of the School Psychologist.**
3 credits.
Provides an understanding of the organization and operation of public schools and the educational and mental health practice settings as well as legal and ethical issues and responsibilities with which a school psychologist must deal.

**PSYC 527. Psychological Foundations of Education.**
3 credits.
Psychological theories and research applied to classroom and school settings.
PSYC 530. The Psychology of Child Abuse and Neglect.  
3 credits.  
Review of current psychological literature on child abuse and neglect including identification, etiology, treatment, prevention and legal aspects. Family violence issues are also discussed.

3 credits.  
An introduction to measurement and statistical tools used in conducting research. Specific topics include: reliability and validity; research methods and statistical analysis; quantitative and qualitative methods; needs assessment and program evaluation; use of technology; and legal and ethical issues of research.

PSYC 601. Special Topics in Psychology.  
1-3 credits.  
In-depth study of current topics in the field of psychology. Content varies depending on the topic and instructor. May be repeated for different Special Topics. Prerequisite: Permission of instructor.

3 credits.  
Provides an introduction to the management and analysis of data using statistical software packages. Emphasis is placed on planning data files, performing basic data transformations and statistical analyses, and transferring data across software programs. Prerequisites: Completion of an undergraduate or graduate introductory statistics course and permission of instructor.

3 credits.  
Provides an understanding of types of research, inferential statistics, and research report development. Special emphasis on experimental designs, power analysis, analysis of variance, multiple comparisons, and effect sizes. Prerequisite: Permission of instructor.

3 credits.  
Measurement applications of classical test score theory, generalizability measurement theory, scale construction concepts, test bias, standard setting techniques and item response theory. Prerequisite: PSYC 605.

PSYC 607. Assessment Procedures in Counseling.  
3 credits.  
A study of individual and group approaches to assessment and evaluation. Activities include administering, scoring, and interpreting tests of ability, interest, personality, and achievement for both children and adults. Students also assess case studies, perform a self-analysis, and review selected assessment procedures. Computer-assisted assessment and ethical issues are addressed. Prerequisite: PSYC 600 or permission of instructor.

3 credits.  
Continuation of PSYC 605, with emphasis on multivariate analyses, including multiple regression, discriminant analysis and MANOVA. Prerequisite: PSYC 605.

3 credits.  
Provides an understanding of applied research methods, including Qualitative Research, Quasi-Experimental designs, and program evaluation: Prerequisite: PSYC 605.
PSYC 610. Applied Behavior Analysis.
3 credits.
This course examines the science and practice of applied behavior analysis, which focuses on how environmental events influence the development and change of behavior repertoires, emphasizing the knowledge and skills necessary to plan, implement and assess interventions for behavior problems in a variety of settings including health and human services, education, business and industry, and with individuals from diverse populations. Prerequisite: Permission of instructor.

PSYC 611. Comparative Psychology.
3 credits.
Introduces graduate students to basic concepts, methods and theories in the study of animal behavior. Topics covered include the evolution of behavior, communication, sensory processes, reproductive behavior, parental behavior, sociality, aggression, territoriality and feeding behavior.

PSYC 612. Personality Theories.
3 credits.
Major theories of personality, including historical and philosophical assumptions underlying them, with a consideration of research stimulated by these theories.

3 credits.
Examines a wide range of human cognitive processes including pattern recognition, attention, memory, language and decision making. The course emphasizes research methods, empirical findings and applications in selected areas.

PSYC 614. Advanced Developmental Psychology.
3 credits.
An overview of the theories, research, and applications relevant to the development of behavior and mental processes throughout the life span.

PSYC 616. Social Psychology.
3 credits.
An advanced study of the research and theory of the way an individual's social behavior is influenced by the behavior and attitudes of other individuals.

PSYC 617. History of Psychology.
3 credits.
The history of psychology as depicted through the development of American psychology. Consideration of the history of schools of psychology as well as the historical development of areas such as clinical, physiological, developmental, industrial, cognitive and social psychology.

PSYC 618. Social and Emotional Development.
3 credits.
An examination of how developmental psychologists collect and interpret data; how theory guides research and practice. Topics include: early determinants of behavior; identity development; prosocial and antisocial behavior; family, peers, and schools. Exemplars, such as attachment, are used to show how research, theory, culture, and clinical practice shape a topical area. Prerequisite: Permission of the instructor.

3 credits.
This course examines the characteristics of and processes through which thinking changes with development. Important research paradigms and theoretical perspectives, as well as various practical implications of related research will be explored. Topics include perception, memory, language, reasoning, individual differences, academic skills and selected applied topics.
PSYC 622. Abnormal Psychology.
3 credits.
A critical review of the issues, research and etiological aspects of the mental disorders, as well as the general concepts used in the area of psychopathology. Topics include models of pathology and wellness, mind and body problems, and interprofessional relationships.

PSYC 624. Neuroscience.
3 credits.
An analysis of brain/behavior relationships with an emphasis on neurological and biochemical mechanisms. Neuropsychological theory and psychopharmacology will be emphasized.

PSYC 626. Advanced Developmental Psychopathology.
3 credits.
An overview of child and adolescent behavior disorders and psychopathology with an emphasis on diagnostic and treatment issues.

PSYC 630. Clinical Mental Health Counseling.
3 credits.
An introduction to the history, profession, and practice of clinical mental health counseling. Specific topics include: intervening with individuals, groups, families; developing and evaluating programs; consulting with other professional helpers; promoting personal and systemic well-being; dealing with diverse clients; and addressing legal, ethical, and professional identity issues.

PSYC 640. School Counseling.
3 credits.
An introduction to the history, theory, philosophy, principles, organization, and personnel practices of school counseling. Specific topics include: developing and evaluating programs; intervening with individuals, groups, parents and schools; dealing with diverse students; and addressing legal, ethical and professional identity issues.

PSYC 643. Advanced School Counseling.
3 credits.
A study of the role of the counselor in elementary, middle, and secondary schools with an emphasis on the function of counseling, consultation and coordination. Techniques and materials used with children, teachers and parents will also be examined. Prerequisite: PSYC 640 or permission of instructor.

PSYC 645. Student Personnel Services.
3 credits.
A detailed study of student services offered in colleges and universities. Legal, ethical and professional identity issues are also examined.

PSYC 646. The American College Student.
3 credits.
An examination of developmental theory and review of the literature and research related to the American college student.

PSYC 649. Multiculturalism, Diversity and Difference: Theory, Research and Practice in Student Affairs.
3 credits.
An environment for students to cognitively and experientially explore issues of multiculturalism, diversity and differences as it relates to work in student affairs, student services and higher education through assignments, exercises, discussions, readings and reflection.
PSYC 650. Organization and Administration of Student Services.
3 credits.
A study of organizational and management theory/practice in higher education. Upon completion of the course, students will have an understanding of the college/university as an organization and the role that student service programs play in the mission of the institution. Prerequisite: PSYC 645.

PSYC 651. Supervision and Consultation Processes in Student Personnel.
3 credits.
This course will focus on the processes of supervision and consultation as they apply to student personnel management. Opportunities will be provided to make practical application of management knowledge and organization theories to personnel issues. Prerequisite: PSYC 650.

PSYC 660. Counseling Theories.
3 credits.
A study of the philosophy and principles of various schools of counseling, and the techniques employed in the counseling process by practitioners in each of these schools.

PSYC 661. Counseling Techniques.
3 credits.
An opportunity to learn fundamental counseling skills that form the foundations of successful counseling practice. Students develop these skills through experiential learning activities, directed reading assignments, discussions and lectures, practice in small groups, and participation in critiques of videotaped microcounseling sessions. Prerequisite: Permission of instructor.

PSYC 663. Substance Abuse Counseling.
3 credits.
A study of substance abuse to include related personal, social and physiological factors, and methods of rehabilitation and counseling for the chemically dependent. Prerequisite: PSYC 515 or equivalent.

3 credits.
An experiential study of the relationship between counselor and client. Explores the phases of relationship from initiation to termination, including predictable crises and issues which normally arise. Analysis of resistance, transference and counter transference, dependency, and termination issues will be discussed. Attention will also be given to gender and diversity issues. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.

PSYC 665. Group Counseling.
3 credits.
A study of the theories, techniques, dynamics, process and practice of group counseling. Students become members of a laboratory group and also conduct research into issues of group counseling. Each student pairs with a partner, creates an intervention plan, and facilitates the group process. Prerequisites: PSYC 660 and PSYC 661 or permission of instructor.

3 credits.
A study of the dynamics of couple and family living, focusing on social change, social stratification, mate selection, marriage, divorce, child rearing, sexuality and individual behavior, and its effect on the family structure. Prerequisite: Permission of instructor.

PSYC 669. Career Development.
3 credits.
The impact of career choice throughout the life span is explored. Vocational theories and a variety of approaches to career decision-making will be introduced. Several career-related assessment instruments will be used to help students develop skills in administration and interpretation.
PSYC 674. Assessment I.
3 credits.
Students develop proficiency with administration, interpretation and reporting results of current cognitive ability measures and the issues in nondiscriminatory multicultural assessment. Prerequisite: Permission of instructor.

PSYC 680. Independent Study.
1-3 credits.
An opportunity for independent study or research in an area of special interest. Prerequisite: A written plan must be submitted and approved by a faculty supervisor, the student's program director and the department head prior to registration.

PSYC 685. Psychopathology: Diagnosis and Intervention Planning.
3 credits.
Training and practice in the following: making reliable and valid diagnoses of mental disorders; appropriately addressing the ethical and cultural issues involved; performing collaborative diagnostic interviews; participating in effective case conferences; and planning interventions to achieve therapeutic goals. Prerequisite: PSYC 600, PSYC 661 or permission of instructor.

PSYC 690. Experimental Analysis of Behavior.
3 credits.
The experimental analysis of behavior (EAB) involves identifying functional relations between behavior and its controlling variables, primarily in individual organisms, and typically under rigorous laboratory conditions. Focus will be on the findings from empirical research with some attention to extensions of the fundamental principles of behavior to applied behavior analysis (ABA) and to the underlying philosophy for both EAB and ABA, radical behaviorism.

PSYC 695. Practicum.
1-6 credits.
Provides a variety of supervised field, laboratory or school experiences. Course will be graded on an S/U basis. Prerequisite: Permission of instructor.

PSYC 698. Comprehensive Continuance.
1 credit.
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

1-2 credits.
Continued study, research and writing in the area of thesis concentration. (This course does not count towards fulfilling the required hours for the degree; it may be repeated as needed. Students who have registered for six hours of thesis credit but have not finished the thesis must be enrolled in this course each semester until they complete the thesis.)

PSYC 700. Thesis Research.
3-6 credits.
This course is graded on a satisfactory/unsatisfactory/in progress (S/U/I) basis.

PSYC 710. Counseling Strategies: Special Topics.
1 credit.
Training and practice in the use of a specific counseling method. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.
PSYC 710A. Counseling Strategies. Crisis Intervention.
1 credit.
Training and practice in crisis intervention with individuals, groups, and communities. Specific techniques include suicide prevention, telephone intervention, psychiatric emergency work, outreach strategies, traumatic stress counseling, and disaster intervention. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.

PSYC 710B. Counseling Strategies: Brief Counseling.
1 credit.
An introduction to time-limited counseling. Solution-focused, narrative, and constructivist approaches to counseling are discussed. Students practice the micro-skills involved in goal-directed, efficient counseling strategies. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.

PSYC 710C. Counseling Strategies: Theory and Techniques of Play Therapy.
1 credit.
Overview of the principles of play therapy. Training and practice in basic play therapy techniques. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.

PSYC 710D. Counseling Strategies: Relaxation and Hypnotic Techniques.
1 credit.
Training and practice in the use of relaxation and hypnotic techniques to reduce anxiety, manage pain, envision goals, enhance personal efficacy, and facilitate behavioral change. Specific topics include mind/body interaction, indications and counter-indications, and ethical issues. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.

PSYC 727. Instructional Interventions: Science and Practice.
3 credits.
Principles and research relevant to teaching and learning in schools. Emphasis will be placed on the culture/organization of the schools, curriculum and interprofessional collaborations. The psychology of reading will be highlighted, including assessment, interventions, and work with English Language Learners. Prerequisite: Permission of instructor.

PSYC 748. Gender Issues in Counseling.
3 credits.
An exploration of gender issues as they relate to counseling theories and techniques. The social construction of gender roles as well as the gendered nature of society are discussed. Implications for working with women, men, gay/lesbian/bisexual, and transgendered individuals are addressed. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.

PSYC 749. Multicultural Perspectives of Intervention.
3 credits.
Offers a cognitive and experiential study of sociological and psychological variables, such as race, gender and socioeconomic status, that influence the professional helping relationship. Culturally relevant models of counseling theory and practice are presented. Prerequisite: Permission of instructor.

PSYC 750. Consultation and Intervention Techniques.
3 credits.
Provides the knowledge and skills necessary to engage in consultation and systems level intervention within educational and mental health settings. Prerequisite: Permission of the instructor.

PSYC 751. Psychotherapy with Children and Adolescents.
3 credits.
Theoretical and cognitive bases for understanding frequently used therapeutic strategies and techniques. Specific sections will focus on general practices and procedures in psychotherapy, and on therapeutic strategies for children, adolescents and families.
PSYC 752. Theory and Practice of Play Therapy.
3 credits.
An introduction to the historical and contemporary context of play therapy including an overview of play therapy theories and methods. Examination of cultural influences, ethical issues, and outcome research in play therapy. Prerequisite: PSYC 660, PSYC 661 or permission of instructor.

3 credits.
An overview of the theoretical and applied aspects of operant behavior modification and cognitive behavior therapy. The course focuses on applications with children, adolescents, and their families in educational and mental health settings.

PSYC 760. Supervision and Consultation for Counselors.
3 credits.
The course includes an introduction to concepts, processes, and styles of supervision. It offers students the opportunity to gain experience in providing supervision to other counselors in training. The course also provides students with the knowledge and skills necessary to engage in consultation, negotiation/mediation, and systems level intervention in mental health and education settings. Prerequisite: PSYC 660, PSYC 661, PSYC 664 or permission of instructor.

PSYC 768. Couple and Family Counseling.
3 credits.
A study of the various approaches to couple and family counseling, focusing on theory, techniques and research that relate to the counseling process. Prerequisites: PSYC 661 and PSYC 668 or permission of instructor.

PSYC 770. Assessment and Public Policy.
3 credits.
Delineates and compares the history and role of assessment, accountability, and quality assurance to the governance, funding, and purposes of higher education; describes an implementation process of assessment for educational programs and services. Prerequisite: PSYC 600.

PSYC 777. Assessment II.
3 credits.
An advanced laboratory course for students in school psychology. Covers comprehensive evaluation of domains and abilities which relate to academic success. Enrollment is limited to allow individual instruction and supervision. Prerequisite: PSYC 674 or permission of instructor.

PSYC 778. Advanced Practicum.
1-6 credits.
Provides a variety of supervised field experiences in schools and other settings. The student may re-enroll in this course for different types of practicum experiences. Course is graded on an S/U basis. Prerequisite: Permission of instructor.

PSYC 779. Assessment III.
3 credits.
Advanced students achieve basic understanding and competency in the administration and interpretation of personality assessment procedures most frequently used in school settings with children and adolescents. Enrollment is limited to allow individualized instruction and supervision. Prerequisites: PSYC 606, PSYC 674, and PSYC 777 or permission of instructor.

PSYC 790. Internship.
3-6 credits.
Provides a student with a supervised field experience. Students should contact their program director for specifics concerning the internship experience. Course will be graded on an S/U basis. Prerequisite: Permission of program director.
PSYC 799. Educational Specialist Research Project Continuance.
1-2 credits.
Continued study, research and writing in the area of Educational Specialist research project. Course may be repeated as needed but does not count toward fulfilling the required hours for the degree. (Students who have registered for the maximum hours of PSYC 800, Educational Specialist Research Project, but have not finished the project must be enrolled in this course each semester until they complete the research project.)

PSYC 800. Educational Specialist Research Project.
1-3 credits.
Opportunity for advanced applied research in an area of special interest to a school psychology or community counseling student in an Educational Specialist program. Specific course requirements are listed in the separate research project guidelines for school psychology and community counseling students. Course is graded on an S/U basis. Successful completion of the research project fulfills the comprehensive examination requirement for the School of Psychology educational specialist degree. Prerequisite: Permission of program director.

PSYC 805. Single Case Experimentation.
3 credits.
This course examines the logic and practical considerations of experimentation in research using small numbers of subjects, as it relates to single case experimental designs, which demonstrate functional relationships between adjustments in independent variables and their effects upon dependent variables in repeated measures behavioral research.

PSYC 812. Assessment Methods and Instrument Design.
3 credits.
This course covers reliability and validity issues associated with instrument and methodology design. Delineation of goals and objectives, assessment purposes, test and task specification, item/task development, pilot, review, and maintenance procedures will be applied. Consideration of multifaceted validity and validation issues will be stressed throughout the process. Prerequisite: PSYC 605, PSYC 606 or permission of instructor.

PSYC 814. Performance Assessment.
3 credits.
The optimal use of tools that assess products and processes is explored within a variety of assessment contexts. This course focuses on the design, development and implementation of performance-based assessment. Task analysis and design, scoring rubric development and use, and assessment deployment are covered through critique and practice. Potential benefits offered by computer-based administration of performance assessments are introduced. Particular emphasis is given to validity issues throughout the course. Prerequisite: PSYC 606.

PSYC 816. Classical Test Theory and Generalizability Theory.
3 credits.
This course examines classical test theory and generalizability theory and their application to the practice of assessment. As a foundational level, model assumptions are explored and used to understand the development of different notions of reliability and dependability. At a practical level, statistical techniques developed from these two theories will be applied to develop and/or improve assessment practices. Prerequisite: PSYC 606.

PSYC 822. Assessment in Early Childhood Special Education.
3 credits. (Cross-listed as EXED 622.)
This course provides the student with exposure to screening assessment and diagnostic procedures utilized in the identification of handicapped students ages 0-5. A case study approach to diagnostics is emphasized. Family assessment is also an integral part of the course. Prerequisites: Permission of the instructor and EXED 621 or equivalent.
**PSYC 825. Doctoral Seminar in Professional Psychology.**
1-3 credits.
This course covers issues and content designed to foster the development of the student's identity as a doctoral-level professional psychologist. Course is graded on S/U basis.

**PSYC 826. Advanced Seminar in Developmental Psychopathology.**
3 credits.
This course reviews at the doctoral level current research and theory regarding childhood disorders, their origins, their consequences for life span development, and the factors that mitigate against them. Specific topics include theories of development and psychopathology; taxonomy and diagnosis; longitudinal studies of continuity and change; development of depression, aggression, and anxiety; and resilience.

**PSYC 830. Structural Equation Modeling.**
3 credits.
Exploratory and confirmatory factor analysis, path analysis and relevant aspects of measurement theory are introduced. In this context, several mathematical and technical issues about model fitting are presented: the statistical requirements for a model, estimators and estimation, model evaluation, model modification, software use, and pertinent troubleshooting strategies. Prerequisites: PSYC 606 and PSYC 608.

**PSYC 832. Item Response Theory.**
3 credits.
This examines the use of Item Response Theory models for test construction and ability estimation. Models for tests with dichotomous and polytomous items will be covered. Other topics for discussion include advantages and disadvantages of IRT relative to Classical Test Theory, the detection of differential item functioning (or item bias), and the role of IRT in Computer Adaptive Testing. Prerequisite: PSYC 606.

**PSYC 834. Computers and Testing.**
3 credits.
This course focuses on the computer as a medium for the administration and scoring of achievement tests. Strengths and limitations of current computerized testing methods are addressed, as well as future issues and challenges. Topics to be discussed include linear and adaptive tests, problem simulations, performance assessment, and expert systems. Prerequisites: PSYC 606 and PSYC 832.

**PSYC 836. Hierarchical Linear Models.**
3 credits.
This course will illustrate how to use Hierarchical Linear Models (HLMs) to answer research questions in education and the social sciences. Students will learn HLM through applied experiences with a variety of different hierarchical data structures (e.g., students within schools, patients within clinics), including longitudinal and met-analytic data. Prerequisite: PSYC 608.

**PSYC 840. Qualitative Research Design and Analysis.**
3 credits.
This course is designed to give students an introduction to the philosophical, conceptual, and practical basis of qualitative research. Provides an introduction to all phases of qualitative research design, developing research questions, doing data collection and analysis and writing a qualitative research proposal. Prerequisite: Permission of instructor.

**PSYC 850. Special Topics in Assessment and Measurement.**
3 credits.
In-depth study of current topics in the field of assessment and measurement. Content will vary depending on the topic and instructor. May be repeated for different special topics. Prerequisite: Permission of instructor.
PSYC 852. Advanced Consultation and Supervision.
3 credits.
An advanced course in models of consultation; supervision and leadership/management. 
Prerequisite: Permission of instructor.

PSYC 855. Assessment Consultation and Practice.
3 credits.
This course provides guided opportunities for supervised application of sets of assessment skills and competencies with the development of professional self as an assessment practitioner. Students join with center faculty members to engage in ongoing assessment projects concerning at-risk students, alumni surveys, academic undergraduate and graduate degree programs, general education, academic program reviews, and distance education programs. Ethics will be emphasized, spanning the continua of assessment practice from establishing consultation relationships, assessment design, data collection, analysis, maintenance and archiving of data, and report writing to presentation of findings.

PSYC 864. Processes of Psychotherapy.
3 credits.
This class is a laboratory experience which explores the phases of the therapeutic relationship between therapist and client. The framework for conceptualizing psychotherapy will be the integration of the interpersonal approach with a multi-model, systems orientation. Topics such as diversity, resistance, transference and countertransference will be discussed.

PSYC 865. Integrative Psychotherapy for Adults.
3 credits.
An advanced course surveying the major approaches to psychotherapy (e.g., psychodynamic, cognitive, behavioral, and humanistic) in a manner designed to provide students with ways of integrating these approaches into a coherent theoretical model that can guide conceptualizations and interventions during the therapeutic process.

PSYC 874. Cognitive Assessment.
3 credits.
Students achieve basic understanding and competency in the administration and interpretation of intellectual and academic assessment procedures for children, adolescents and adults across a variety of settings and clinical areas. Issues of nondiscriminatory multicultural assessment will also be addressed. Students are also enrolled in a lab (PSYC 878) as part of this course. Prerequisite: Permission of instructor.

PSYC 876. Personality Assessment.
3 credits.
Students achieve a basic understanding and competency in the administration and interpretation of personality assessment procedures for children, adolescents and adults across a variety of settings. Issues of nondiscriminatory multicultural assessment will also be addressed. Prerequisite: Permission of instructor.

PSYC 877. Advanced Seminar In Child and Family Assessment.
3 credits.
This doctoral-level course reviews advanced methods for the assessment of children and families, and focuses on the development of a case formulation that integrates test findings and informs intervention efforts.

PSYC 878. Doctoral Practicum.
1-6 credits.
Provides a variety of supervised field experiences for advanced, applied psychology doctoral students. Students may enroll for several types of practicum experiences (e.g., clinic, school, HDC). Course is graded on an S/U basis. Prerequisite: Permission of instructor.
PSYC 879. Doctoral Assessment Practicum.
3 credits.
This course provides guided opportunities for supervised application of sets of assessment skills and competencies with the development of professional self as an assessment practitioner. Students join with center faculty members to engage in ongoing assessment projects concerning at-risk students, alumni surveys, academic undergraduate and graduate degree programs, general education, academic program reviews, and distance education programs. Ethics will be emphasized, spanning the continua of assessment practice from establishing consultation relationships, assessment design, data collection and analysis, maintenance and archiving of data, and report writing to presentation of findings. Course will be graded on an S/U basis.

PSYC 880. Introduction to Child and Adolescent Neuropsychology.
3 credits.
This course will include a review of central nervous system (CNS) anatomy and physiology as it pertains to brain/behavior relationships and neuropsychological assessment. Emphasis is on providing a foundation for more intensive further evaluation and remediation within the school setting of children and adolescents surviving traumatic brain injury. Prerequisite: Permission of the instructor.

PSYC 881. Issues and Techniques in Research and Evaluation.
1-3 credits.
Opportunity for applied research and/or program evaluation in areas of special interest. Students will participate as full members of a research team and assist with the design of a study. This course will serve as a basis for preparing students to develop the proposal for their doctoral research project. Course is graded on an S/U basis. Prerequisites: PSYC 605 and PSYC 608 or equivalent, or permission of the instructor.

PSYC 889. Advanced Personality Assessment.
3 credits.
Critical review of theory, practice and research with regard to personality assessment techniques. Emphasis will be placed on teaching the Rorschach and MMPI, and using these and other assessment procedures to answer specific diagnostic questions (e.g., depression, psychosis, personality disorders, etc.). Prerequisite: PSYC 779 or equivalent.

PSYC 890. Doctoral Internship.
6 credits.
Supervised internship in a school and/or community agency approved by the Program Coordinator. Designed to meet APA internship guidelines. Course is graded on an S/U basis. Prerequisites: Completion of all course work and permission of program committee.

PSYC 891. Doctoral Assessment Internship.
3 credits (can be taken for a second semester).
Supervised assessment internship in a higher education, kindergarten through 12th-grade, business or health care setting that has been approved by the program coordinator. Typically involves the design and implementation of assessment strategies to meet the needs of the institution or agency. Course will be graded on an S/U basis. Prerequisites: Completion of all doctoral program course work, PSYC 878 and permission of the program committee.

PSYC 895. Doctoral Practicum in College Teaching.
1-3 credits.
This practicum course provides instruction, modeling, and supervision in teaching college or professional level learners. Students will teach undergraduate courses in psychology and/or make professional presentations, receiving feedback and supervision from the instructor. Prerequisites: Master's degree and permission of instructor.
PSYC 899. Dissertation Continuance.
1-2 credits.
Continued study, research and writing in the area of dissertation concentration. (This course does not count toward fulfilling the required hours for the degree; it may be repeated as needed. Students who have registered for six hours of dissertation credit but have not finished the dissertation must be enrolled in this course each semester, including summer, until they complete the dissertation.)

6-12 credits.
Provides advanced research required of all doctoral candidates. Course is graded on an S/U basis. Prerequisites: completion of all course work and permission of program coordinator.