Educational Psychology (EPSY)

epsy.education.uconn.edu

5092. Practicum

Variable (1-6) credits. Prerequisite: Open to master's and Sixth-Year students. May be repeated for credit.

The implementation and application of theory in the student's area of specialization.

5094. Capstone in Secondary Transition

Three credits. Prerequisite: Instructor consent.

Serves as a capstone for the Transition to Adulthood graduate certificate. Provides students the opportunity to independently design and complete activities to demonstrate specific transition competencies through the creation of a portfolio. This project has been designed as a vehicle for ensuring that all students in this certificate program have mastered the teaching and administrative competencies necessary for implementing a successful secondary transition program for individuals with disabilities.

5108. Students with Special Needs in the Classroom Environment

Three credits.

Methods for identifying, planning for, and working effectively with children with special needs in the general education classroom. Intended for non-SPED majors only.

5113. Beginning Reading Supports for Students with Learning Difficulties

Three credits. May be repeated for a maximum of six credits.

Provides graduate level students with knowledge and skills related to supporting early reading success for students with disabilities and at risk for experiencing learning difficulties.

5114. Adolescent Reading Supports for Students with Learning Difficulties

Three credits. May be repeated for a maximum of six credits.

Research-based instructional interventions and infrastructure supports (e.g., SRBI, RtI) necessary to improve reading comprehension outcomes for struggling adolescent readers including students with high-incidence disabilities.

5115. Writing Supports for Students with Learning Difficulties

Three credits. May be repeated for a maximum of six credits.

Writing instruction and assessment designed to support K-12 students who are at-risk for or experiencing learning difficulties or disabilities, with an emphasis on incorporating evidence-based methods into a rich, engaging, and meaningful writing curriculum.

5116. Assessment in Special Education

Three credits.

Application of assessment in special education focusing on current purposes, policies, and practices in schools.

5119. Policy, Law, and Ethics in Special Education

Three credits.

The impact of policy and law on the professional role of special educators.

5121. Developmental Foundations of Exceptionality

Three credits.

An exploration of the link between normative theory and research in child development with assessment, understanding, and intervention for children and youth with exceptionalities.

5123. Instructional Strategies and Adaptations for Students with Special Learning Needs

Three credits.

Principles and practices for the provision of effective instruction for students with special learning needs.

5135. Creating and Sustaining a Positive School Climate

Three credits. Prerequisite: Open only to students in the UConn Administrator Preparation Program; instructor consent required.

Designed to help aspiring school administrators develop practices and processes for establishing and sustaining a positive school climate for the purpose of improving student achievement.

5140. Transition Planning for Students with Disabilities

Three credits.

An examination of relevant legislation and recommended practices related to person-centered transition planning for students with disabilities in post-school and adult life, including postsecondary education, employment, community participation, and independent living.

5141. Classroom and Behavior Management for Special Educators

Three credits.

An introduction to Positive Behavior Interventions and Supports (PBIS), including theoretical and empirical support, three-tiered model, and implementation strategies.

5142. Individualized Positive Behavior Support

Three credits. Prerequisite: EPSY 3125 or 5141.

Approaches for adapting programs to the behavioral, social and emotional needs of exceptional learners.

5145. Issues in Postsecondary Disability Services

Three credits.

An examination of issues relating to the assurance of equal educational access for students with disabilities in postsecondary settings.

5146. Advanced Topics in Secondary Transition

Three credits.

An in-depth overview of the transition planning process. Highlights the importance of person-centered planning, encouraging self-determination, and involving individuals and families in the assessment and transition programming process.

5161. Assistive Technology for Access

Three credits. Prerequisite: EPSY 5160.

Introduction to alternate access to the computer as a tool for the performance of educational tasks. Exploration of alternate and adaptive pointing and keyboard devices as well as software to enhance accessibility and productivity for persons with motor impairment, sensory challenges, and cognitive difficulties. Assistive technology solutions and applications for persons with significant disabilities in the educational environment.

5170. Family Centered Practices in Early Childhood Intervention

Three credits. Prerequisite: Instructor consent.

Illustrates the centrality of the family in the life of infants and young children with disabilities and, subsequently, early childhood intervention. This course relies on outside readings, discussions, and completion of performance-based competencies where concepts are interpreted and applied to early childhood intervention.

5171. Evaluation and Assessment of Infants and Young Children with Disabilities or Delayed Development

Three credits. Prerequisite: Instructor consent.

Designed for students who are preparing to work with infants and young children who have disabilities (birth through age five) and their families. Focuses on five functions of assessment relative to young children with disabilities: identification and referral, evaluation to determine eligibility for special education, assessment for program planning, monitoring of individual child progress and program evaluation.

5172. Intervention of Early Childhood Disabilities or Delayed Development and Their Families

Three credits. Prerequisite: Instructor consent.

Illustrates the importance of well planned and executed interventions for infants and young children with high needs and/or disabilities who receive early childhood services under the Individuals with Disabilities Education Act (IDEA). Creation of intervention programs with integrated (across developmental domains) outcomes that stem from a functional assessment and a collaborative team process. This includes interventions and services designed to maximize natural learning opportunities and the use of evaluation tools and progress monitoring for individual children and families as required for federal reporting. Outside readings, class discussions, interactive web-based assignments and completion of performance-based competencies where concepts are interpreted and applied to infants and young children and their families.

5173. Teaching and Collaborating of Infants and Young Children with Disabilities and their Families

Three credits. Prerequisite: Instructor consent.

Provides a foundation for the inclusion of infants and young children with disabilities and their families into inclusive community settings and programs. Inherent within this framework is the ability for personnel to demonstrate strategic planning to accomplish this on a family, community and program. Outside readings, in-class activities, and individual and group applications of competencies.

5183. Lectures in Education

One credit.

Staff members and authorities in education and related fields discuss selected problems.

5188. School-based Practicum in Communication Disorders

Six credits. Prerequisite: Open only to Communication Disorders M.A. students; instructor consent required.

100 clock hours of practicum in assessment, treatment, and prevention of communication disorders in children Pre-K-Grade 12.

5194. Seminar

Three credits. Prerequisite: Open to master's and Sixth-Year students. May be repeated for credit.

Analysis of the issues and research in the field of education.

5195. Workshop in Education

Variable (1-3) credits. May be repeated for credit.

Professional personnel to work cooperatively on problems arising out of actual school situations.

5198. Curriculum Laboratory

Variable (1-6) credits. May be repeated for credit.

Reorganization of courses, reorientation of the program of studies, articulation of administrative units, and development of new materials are considered in relation to the local situation. Students make individual studies of their specific problems, and group studies of related problems.

5199. Independent Study in Education

Variable (1-3) credits. Prerequisite: Instructor consent. May be repeated for credit.

Students requesting this course should have a significant background in education and should present to the instructor problems, well-defined and well laid out for investigation, which hold special interest for them and which will be pursued on the plane of advanced study.

5215. Professional Seminar in Learning Technologies

Three credits. Prerequisite: Open to cohort members in the Two-Summers Master's Program.

Professional issues in the wise integration of learning technologies to classroom instruction.

5220. Introduction to Educational Technology

Three credits.

Instructional applications of productivity software and educational technology.

5221. Wise Integration of Technology into Teaching and Learning Environments

Variable (1-3) credits. Prerequisite: Open only to students in the Integrated Bachelor's/Master's teacher preparation program. Recommended preparation: master's student status in the IB/M program.

Technology integration into classroom teaching for teacher preparation.

5225. Learning Technology Applied in Schools

Three credits. Prerequisite: Open only to students in the Two Summers program in Learning Technology.

Applied project work integrating technology into classroom instruction.

5230. Web-Based Learning

Three credits. Prerequisite: EPSY 5220, 5240, 5510, and 5520.

Design, development, delivery and evaluation of web-based instruction.

5235. Design and Production of Multimedia Presentations

Three credits.

Students will prepare presentations using slides, motion pictures, audiotapes and overhead transparencies; and will explore application of other technological developments to multimedia uses.

5240. Interactive Learning Environments

Three credits. Prerequisite: EPSY 5510 and 5220.

Broad overview of the interactive learning environments (ILEs) that are being used in Education. Introduces students to current research in development and implementation of ILEs.

5245. Capstone Course in Learning Technologies

Three credits. Prerequisite: Open only to students in the Two Summers program in Learning Technology.

E-Portfolio preparation, technology-based professional development design, and program completion artifacts.

5266. Instructional Media and Game Design

Three credits. Prerequisite: Instructor consent.

Introduces students to narrative—the means by which humans share and contextualize information—within the context of instructional game design, the application of game mechanics and design processes in traditionally non-game contexts (sometimes called "gamification"). Through a deconstruction of media and storytelling, we will discuss how to optimally develop engaging, informative, and cooperative educational environments.

5301. Group Processes in Counseling

Three credits.

Experiential and theoretical introduction to group process and dynamics.

5304. Foundations and Contents of School Counseling

Three credits.

Basic philosophical and professional premises of the counseling profession. History of counseling profession, counselor's roles and functions, role of research/theory in counseling, and professional ethics. Individual group, and preventive counseling approaches.

5306. Principles of Career Development in Counseling

Three credits.

Career development and career psychology. Adolescents and adults.

5307. Professional Orientation of School Counseling

Three credits.

Principles and practices of pupil personnel work in educational institutions including all aspects of pupil personnel services; the role of the school counselor as a pupil personnel worker; and as a consultant on teacher-pupil relations.

5308. Counseling: Theory and Practice

Three credits. Prerequisite: EPSY 5307.

Contemporary theories and practices of essential helping skills.

5309. Gender Role Conflict Issues for Helping Professionals

Three credits.

Intensive review of gender role socialization in a workshop setting, emphasizing men's and women's gender role conflicts across the life span. Lectures, readings, discussions, self-assessments, and media are used to explicate core concepts and themes.

5313. Multi-Cultural Parent-Professional Alliances

Three credits.

Alliance-building processes between helping professionals and parents. Multi-cultural relationship development.

5314. Appraisal Procedures in Counseling

Three credits. Prerequisite: EPSY 5306 and 5602.

Use of instruments for estimating abilities, achievements, interest and personality; interpretation of appraisal procedures in counseling.

5315. Counseling: Advanced Practice

Three credits. Prerequisite: EPSY 5308; and instructor consent.

Continuing the work begun in EPSY 5308; to strengthen and extend helping skills.

5316. Cross-Cultural Counseling

Three credits. Prerequisite: EPSY 5308 and 5315.

Theories, skills and practices of counseling with culturally different persons in mental health settings.

5317. Field Work in Counseling and Personnel

Three credits. Prerequisite: Instructor consent. May be repeated for a maximum of 12 credits.

Supervised experience in counseling and related practices in schools and agencies with a concurrent supervisory seminar.

5318. Human Growth and Development over the Lifespan: Implications for Counselors

Three credits. Prerequisite: Department consent.

A review of human growth and development over the lifespan using psychosocial theory with an emphasis on individual and family transitions, learning processes, personality, developmental crises, gender role conflicts and transitions, ethical issues, and strategies to optimize human potential.

5319. School Counseling Internship

Variable (3-6) credits. Prerequisite: Instructor consent. May be repeated for a maximum of 12 credits.

Post practicum experience in school counseling under the supervision of a fully trained and certified professional school counselor for the duration of one school year along with an accompanying on-campus seminar. All core courses in the school counseling program must be completed prior to beginning the internship.

5320. Critical Issues in School Counseling

Three credits. Prerequisite: Instructor consent.

An introduction to the broad profession of counseling; the ethical standards of the American Counseling Association and the American School Counseling Association; and a review and analysis of the critical and emerging issues and incidents facing today's professional school counselors.

5339. Assistive Technology for Curriculum Access

Three credits.

Explores the range of assistive technology devices and software for curriculum access from the preschool through secondary environments.

5396. Directed Student Teaching for Students in the Teacher Certification Program for College Graduates

Nine credits. Prerequisite: Open only to students enrolled in the Teacher Certification Program for College Graduates; instructor consent required.

Supervised student teaching in special education.

5402. Individual Differences in Learners

Three credits.

Foundations for individual differences among elementary and secondary school pupils.

5403. Intellectual Assessment

Three credits. Prerequisite or corequisite: EPSY 5602; open only to students in the School Psychology program; instructor consent required.

Administration of the standard instruments of intellectual assessment and synthesis of the test information into an assessment report.

5404. Pupil Behavior: Studies in Clinical Diagnosis

Three credits. Prerequisite: Instructor consent.

Diagnosis of school problems, report writing for school purposes, and analysis of needs for referral.

5405. Applied Behavior Analysis

Three credits.

Introduction to theories and application of behavioral techniques.

5406. Consultation Theories and Practices

Three credits.

Theories and practices of professional consultation with an emphasis on actual interventions in schools, corporations and social service agencies.

5408. Ethics in Educational and Professional Psychology

Three credits.

Explores the nature of professional virtue in psychology and related educational and human service disciplines.

5420. Roles and Functions of School Psychologists

Three credits.

The roles and functions of school psychologists, including the development of the specialty, delivery models, assessment, and interventions. Addresses the provision of comprehensive and integrated school psychological services as outlined by the National Association of School Psychologists and the health service provider specialty of professional psychology of the American Psychological Association.

5425. Procedures in Academic Assessment

Three credits.

Provide students with knowledge and skills related to conducting multi-method academic assessments (e.g., various norm-referenced and criterion-referenced tests, curriculum-based assessment, direct observation, interviews, review of permanent products, etc.); understanding the assessment of various educational diagnoses (e.g., learning disabilities, intellectual disability); and using academic assessment results to design effective academic interventions.

5430. Childhood Development and Psychopathology

Three credits.

Addresses competencies related to child and adolescent mental disorders, the classification of these disorders, and the basis for diagnosis.

5440. Social, Emotional, and Behavioral Intervention in Schools

Three credits.

Provides students with knowledge and skills related to varied evidence-based methods in psychology and education to promote the social, emotional, and behavioral health and well-being of youth in schools.

5445. Counseling in School Psychology

Three credits.

Provides students with both instruction and practice in counseling individuals and groups within school contexts using a prevention framework. Focus on evidence-based, cognitive-behavioral interventions that address the range of referral questions presented in school settings.

5450. Issues of Cultural Diversity in School Psychology

Three credits. Recommended preparation: enrolled in a graduate level training school psychology program.

Introduction to multicultural issues in education. Examines the theoretical, empirical, and practical literature relevant to culturally and linguistically diverse students and families.

5455. History and Systems of Psychology

Three credits.

Addresses the history and systems of psychology, using a lens that integrates theoretical, empirical, and applied perspectives. Key figures and events in the history of psychology are explored, providing connections to the current status of the field, the many sub-disciplines of psychological research, and the applied specialties.

5461. Professional and Ethical Issues in Behavior Analysis

Three credits. Prerequisite: Instructor consent.

The course will emphasize the identification of ethical and/or legal issues in practice and research; application of a multi-step problem solving framework through which the ethical standards, laws, and guidelines are interpreted; and determination of the best course of action to address the ethical and/or legal issues in the field of behavior analysis.

5462. Behavior Assessment

Three credits. Prerequisite: Instructor consent.

Designed to review the literature relevant to the assessment and treatment of challenging behavior. The course content is based on literature from the field of behavior analysis. Content will include an overview of and logic underlying procedures to complete a functional behavioral assessment of challenging behavior and development of function-based treatments to decrease challenging behavior and increase adaptive behavior.

5463. Experimental Analysis of Behavior

Three credits. Prerequisite: EPSY 5405 and instructor consent.

Provides an overview of basic behavioral processes and presents information relating to human and nonhuman learning with a focus on the experimental analysis of behavior.

5464. Behavior Change Procedures

Three credits. Prerequisite: EPSY 5405 and instructor consent.

Designed to give the learner a broad overview how intervention is conceptualized and applied using the science of Applied Behavior Analysis.

5465. Performance Management

Three credits. Prerequisite: EPSY 5405 and instructor consent.

Provides students with an introduction to performance management, selecting and implementing interventions, and supervision practices.

5491. School Psychology Internship

Variable (3-6) credits. Prerequisite: Instructor consent. May be repeated for a maximum of 12 credits.

Post practicum experience in School Psychology under the supervision of a fully trained and certified professional School Psychologist for the duration of one school year along with an accompanying on-campus seminar. All core courses in the School Psychology program must be completed prior to beginning the internship.

5510. Learning: Its Implication for Education

Three credits.

Nature and types of learning, transfer of training, motivation, nature of instructional outcomes, with particular attention to individual differences among elementary and secondary school pupils.

5515. Professional Seminar in Cognition and Instruction

One credit. May be repeated for a maximum of three credits.

A professional seminar designed to present topics, paradigms, models, and theories in the various fields of educational psychology. The current research programs of the graduate faculty in Cognition and Instruction are presented for discussion in a seminar format.

5520. Instructional Design

Three credits.

Overview of the field of instructional design: instructional theories, prescriptive models, instructional strategies, issues and trends as they relate to the comprehensive development of instructional systems.

5530. Theories of Learning, Cognition and Instruction

Three credits.

Behavioral and cognitive psychology as it applies to instruction.

5540. Research Ethics in Education and Psychology

Two credits.

Ethical issues related to educational and psychological research, including working with institutional review boards, informed consent, deception research, conducting research, reporting research findings, sharing and storing data, record keeping, and APA, APS, ACA, and AERA ethics policies.

5601. Principles and Methods in Educational Research

Three credits.

Methods of research in education designed for Master's level students.

5602. Educational Tests and Measurements

Three credits.

The development of measurement and evaluation techniques.

5605. Quantitative Methods in Research I

Three credits.

Quantitative procedures and analysis of computer output including descriptive and inferential statistics through one-way analysis of variance.

5607. Quantitative Methods in Research II

Three credits.

Quantitative procedures and analysis of computer output including factorial analysis of variance, analysis of covariance, and multiple regression.

5610. Applied Regression Analysis for the Education Sciences

Three credits.

Multiple regression analysis and related techniques with applications to research in education. Topics include assumptions and inference; matrix representations; diagnostics and remedial measures; polynomial regression and interaction models; treatment of categorical independent variables, autocorrelation of errors in time series data, problems of missing values and selection bias, and logistic and ordinal regression models.

5613. Multivariate Analysis in Educational Research

Three credits. Prerequisite: Instructor consent.

An extension of EPSY 5607. Practical emphasis on multiple regression, canonical correlation, multivariate analysis of variance and covariance, discriminant function analysis, and factor analysis.

5621. Construction of Evaluation Instruments

Three credits.

The theory and construction of assessment instruments in the affective domain.

5710. Introduction to Gifted Education and Talent Development

Three credits.

Issues encountered in developing giftedness and talents in students: the nature of exceptional abilities, the history of special provisions, major scientific studies dealing with superior abilities, and contemporary educational systems and models.

5720. Developing Schoolwide Enrichment Programs

Three credits.

An overview of the theory and research behind and components within the Schoolwide Enrichment Model. Practical techniques for implementing the model in classrooms and school districts.

5740. Strategies for Differentiating the Grade Level Curriculum

Three credits.

Instructional and managerial techniques for use within or between classrooms to address learning differences among students. Strategies for improving academic achievement and success of diverse learners. Current and promising practices, as well as relevant research.

5750. Enhancing Creativity in the Classroom

Three credits.

The identification of creative thinking and problem solving and the development and implications of creativity training materials and teaching strategies for the classroom.

5760. Improving Students' Thinking Skills

Three credits.

Designed for teachers and administrators who wish to acquire more information about current research, trends and practices within the field of thinking skills instruction. An overview of the field, with special emphasis on research-based practices, major programs, and models for the improvement of thinking skills.

5780. Social and Emotional Components of Giftedness and Talent Development

Three credits.

Review of current research on affective growth and potential adjustment problems of gifted and talented youth. Vocational concerns, self-concept, self-esteem, and the teacher's role in preventing or remediating affective problems related to giftedness.

5850. Introduction to the Science of Creativity

Three credits.

Compare and contrast major definitions, theories and measures of creativity; to explain how creativity interacts with other related constructs (such as intelligence, personality and motivation); critique past empirical work on creativity; and apply past research toward forming your own research question.

6103. Grant Writing

Three credits. Prerequisite: Instructor consent.

The grant proposal writing process is covered, beginning with identification of potential funding sources through developing skill in writing major components and providing proposal critiques.

6194. Doctoral Seminar

Variable (1-3) credits. May be repeated for credit.

Cooperative study of developments and problems in the student's area of study.

6240. Academic Motivation: Theory, Research and Practice

Three credits. Prerequisite: EPSY 5510.

Examines theory, research and practice related to motivation, particularly the motivation to learn in academic settings. Introduces students to the field of the psychological study of motivation to learn in school settings; to explore the conceptual and practical value of framing of school and learning from a motivational and developmental perspective; to assist students in exploring how motivational theory and research may relate to their own areas of interest and help them in integrating motivational constructs into their research; and for participants to learn from each other and together read interesting new work on motivation to learn (a caring community is the crucible within which learning of enduring value unfolds). Designed for graduate students who are studying issues related to motivation to learn in school settings during the first two decades of life.

6301. Advanced Group Processes

Three credits. Prerequisite: Instructor consent.

Participants and observers in a basic group course. Processing and analyzing of group processes.

6302. Prevention and Intervention in Schools, Education, and the Community

Three credits.

The theory, practice, and science of primary prevention of human problems in schools, education, and the community. Prevention concepts and case studies are presented by the faculty. Students give analysis and critique of course content and develop personal perspectives on prevention interventions and skills in the context of their careers.

6304. The Psychology of Men and Boys in Counseling and Education

Three credits.

The negative effects of men's socialization and gender role conflicts are reviewed from the theory and empirical research in the psychology of men. Lectures, discussions, experiential activities, and psychobiographies of famous men and women are used to promote personal learning and psychoeducational outcomes. Implications for counseling, teaching, and more positive views of men are explored.

6469. Single Subject Research in Education

Three credits.

Introductory and advanced content related to features, types, development, and use of "Single Subject Research Designs" to study of interventions and programs for improving the academic and social behavior outcomes for children and youth in schools.

6491. Doctoral Internship in School Psychology

Variable (3-6) credits. May be repeated for a maximum of 12 credits.

Intensive, one year supervised experience in school psychology setting totaling 1,500 or 2,000 hours of service.

6494. Doctoral Practicum

Variable (1-6) credits. Prerequisite: Instructor consent. May be repeated for credit.

The implementation and application of theory in the student's area of specialization.

6550. Situated Cognition

Three credits. Prerequisite: EPSY 5510, 5520, and EPSY 5530.

Theory, research and applications of situated cognition and situated learning.

6601. Methods and Techniques of Educational Research

Three credits. Prerequisite: EPSY 5605 or a master's level introductory educational statistics class.

A survey of the principal methods employed in the investigation of educational problems, including problem formulation, stating hypotheses, sampling, instrument design, types of research methods and design principles.

6611. Hierarchical Linear Modeling

Three credits.

Theory and applications of hierarchical linear modeling, including organizational and longitudinal multilevel models.

6615. Structural Equation Modeling

Three credits.

An introduction to structural equation modeling. Develop, modify, and interpret a variety of structural equation models commonly used in social science research. Linear models with only observed variables (path analysis), latent variable models without causal paths (confirmatory factor analysis), and latent variable models with causal paths (structural equation modeling). Conceptual understanding, application, and interpretation of structural equation models.

6619. Advanced Modeling Using Latent Variable Techniques

Three credits. Prerequisite: EPSY 6611 and 6615.

Covers several advanced modeling techniques, including multilevel confirmatory factor analysis, multilevel structural equation modeling, latent class analysis, factor mixture modeling, and growth mixture modeling. Emphasis will be on specification, application, evaluation, and interpretation of these models.

6621. Program Evaluation

Three credits. Prerequisite: EPSY 5605, 5607, and 6601.

An overview of quantitative and qualitative procedures used in the evaluation of educational programs. Current trends and practical applications are stressed.

6623. Advanced Program Evaluation

Three credits. Prerequisite: EPSY 6621; instructor consent required. May be repeated once for credit.

Graduate seminar on advanced content related to evaluation context, evaluators, methods, and research, with emphasis on conducting evaluations, current trends, and practical applications.

6636. Measurement Theory and Application

Three credits.

Advanced course in measurement and evaluation. Emphasizes current issues in measurement and the scientific procedures reflected in the literature that suggest alternative solutions to these issues.

6637. Item Response Theory

Three credits.

Advanced course in educational and psychological testing theory. Emphasizes the principles and processes of the most sophisticated approach to educational test construction and scoring available today.

6638. Advanced Topics in Item Response Theory

Three credits. Prerequisite: EPSY 6637; instructor consent required.

Applications of IRT to measurement problems such as equating, detection of differential item functioning, and adaptive testing. Extensions of unidimensional dichotomous models to polytomous responses and multidimensional tests. Extensive use of Monte Carlo data to investigate psychometric issues.

6639. Advanced Techniques for Psychometric Research

Three credits.

Monte Carlo techniques for psychometric research. Design and carry out research studies for investigating new and existing psychometric and statistical procedures using simulated data. Estimation procedures for linear and nonlinear models for observed and latent variables. Students will develop their own custom computer programs and use existing software packages. Programs will primarily be written in Fortran 90.

6651. Introduction to Methods for Causal Inference Using Educational Data

Three credits. Prerequisite: EPSY 5605 and 5607.

A survey of four main designs for making causal inferences from educational data and the rationales for the use of these designs. The designs considered are: Randomized experiments, regression discontinuity, instrumental variables and non-equivalent control group. The course introduces Campbell's validity framework and applies this framework to the designs considered. Techniques for sample size planning and power analysis are introduced. Other topics covered include: mediation and moderation analysis and the ethics on research on human populations.

6655. Advanced Causal Inference with Data

Three credits. Prerequisite: EPSY 5610 and 6651.

This course is an exploration of the problems that arise in making inferences about causal effects from non-experimental data and some potential solutions to those problems. Topics covered include: regression approaches to causal inference; paradoxes that arise when interpreting non-experimental data; the "potential outcomes" approach to causal inference (often called Rubin's Causal Model); univariate and multivariate matching methods; multivariate distance measures; propensity score estimation methods; using the propensity score to match, subclassify and weight; Instrumental Variables applications of Rubin’s Causal Model; Directed Acyclic Graphs.

6770. Curricular Options for High Ability Learners

Three credits.

Curriculum theory and techniques with special attention to the development of instructional materials.