901. Advanced Topics in Machine Learning
Spring, 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: CSE 841, R: Open only to Computer Science majors. Approvals of department.
SA: CPS 941

902. Selected Topics in Computer Networks and Distributed Systems
Spring of even years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: CSE 822, CSE 812. R: Open only to Computer Science or Electrical Engineering majors.
Advanced topics and developments in high-speed computer networks, protocol engineering, and distributed computer systems.
SA: CPS 910

903. Selected Topics in Algorithms and Complexity
Spring of odd years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: CSE 830 and CSE 860. R: Open only to Computer Science majors. Approvals of department.
Current research in the general theory of algorithms and computational complexity.
SA: CPS 960

904. Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 72 credits in all enrollments for this course. P: CSE 840. R: Open only to Computer Science and Electrical Engineering majors.
SA: CPS 999

COUNSELING, EDUCATIONAL PSYCHOLOGY AND SPECIAL EDUCATION  CEP
Department of Counseling, Educational Psychology and Special Education
College of Education

150. Reflections on Learning
Fall, Spring, Summer. 3(3-0) Interdepartmental with Teacher Education. Administered by Teacher Education.
Students' experiences as learners in comparison to psychological, sociological, and anthropological theories and assumptions about learning and teaching in and out of school.

441A. American Sign Language I
Fall, Spring, Summer. 3(3-0) P: (CEP 441B) R: Not open to freshmen.
Production, conversation, and grammatical analysis of American Sign Language.

441B. American Sign Language II
Fall, Spring, Summer. 3(3-0) P: (CEP 441A) More advanced lexical and syntactic structures of American Sign Language. Sentence types, verb inflections, aspect marking, and story telling. Translations between American Sign Language and English.
Counseling, Educational Psychology and Special Education—Descriptions of Courses

442A. American Sign Language III
Fall, 3(3-0) P: (CEP 441B)

442B. American Sign Language IV
Spring, 3(0-0) P: (CEP 442A)

443A. Braille Literacy I
Fall, 3(1-4) R: Open only to undergraduate students in the Special Education major whose area of emphasis is visual impairment or to master’s students in the Special Education major.
Reading and writing standard English Braille Grade II. Familiarity with textbook formats. History and development of Braille. Perkins Braillewriter and slate and stylus.

443B. Braille Literacy II
Spring, 4(1-6) P: (CEP 443A) R: Open only to undergraduate students in the Special Education major whose area of emphasis is visual impairment or to master’s students in the Special Education major.
Accuracy in reading and writing Nemeth Braille Code for mathematics and science, use of abacus for basic math operations.

444. Education of Students with Severe and Multiple Disabilities (W)
Spring, 3(3-0) P: Completion of Tier I writing requirement. R: Not open to freshmen or sophomores.
Definition of severe and multiple disability. Special education services for students with severe and multiple disabilities.

445. Educational Technology in Special Education
Spring, 3(1-4) P: (CEP 442A or concurrently) R: Open only to seniors in the Special Education major whose area of emphasis is visual impairment or to master’s students in the Special Education major.
Technological adaptations for communication, including low technology and high technology, and innovative uses for common devices.
SA: CEP 845

449. Behavior Management in Special Education
Spring, 3(0-6)
Management practices for behavior problems and disorders. Applied behavior analysis, social skills acquisition through cooperative learning and cooperative discipline. Focus on problem-solving and peer collaboration.
SA: CEP 849

451. Models of Special Education Administration and Services
Spring, 3(2-2) Interdepartmental with Educational Administration. R: Open only to students admitted to the teacher certification program in emotional impairment or learning disabilities or to master’s students in the Special Education major.
Application of theory and research to special education program design and implementation.
SA: CEP 851, EAD 851

452. Students With Disabilities in the Regular Classroom
Fall, Summer 3(3-0)
Problems and issues in educating children with disabilities in the least restrictive environment. Legal, attitudinal, and practical factors which influence teachers and students.
SA: CEP 852

456A. Deaf-Blind Children and Youth in Elementary and Secondary Education
Fall, 4(3-2) P: (CEP 441A or concurrently and CEP 443A or concurrently) R: Open only to students admitted to the teacher certification program in deaf education or visual impairment or to master’s students in the Special Education major.
Assessing and teaching deaf-blind students. Sensory skills, behavior management and modification, language, communication and independent living.
SA: CEP 856A

457. Principles of Orientation and Mobility
Fall, 3(2-3) R: Open only to students admitted to the teacher certification program in visual impairment or to master’s students in the Special Education major.
Philosophical, social, and psychological aspects of independent mobility for persons who are blind and disabled. Environmental awareness and concept development in using adaptive travel techniques for navigation.
SA: CEP 857A

460. Communication Skill Training for the Helping Professional
Fall, Spring, 3(3-0) R: Not open to freshmen or sophomores.
Interpersonal communication focusing on dynamics of listening process, interpersonal style, and barriers to communication. Emphasis on the mastery of microskills.

470. Disability in a Diverse Society
Spring, 3(0-3) R: Open only to juniors or seniors or graduate students.
Needs and life experiences of persons with various physical and mental disabilities, types of services designed to meet these needs, multicultural issues relevant to disabilities, and career opportunities available in the field.

500. Psychology of Learning in School and Other Settings
Fall, Spring, Summer, 3(3-0)
Learning as active, socially-mediated construction of knowledge in school, home, community, and work settings. What is learned, how it is taught and learned, and what learners bring to the setting.

502A. Internship in Teaching Diverse Learners II: Learning Disabilities
Spring, 8(2-4) P: CEP 801A, CEP 802A, TE 501.
R: Open only to students admitted to the teacher certification program in learning disabilities or to master’s students in the Special Education major.
Not open to students with credit in CEP 502B or CEP 502C or CEP 893F. C: CEP 803C concurrently, CEP 804C concurrently.
Internship in heterogeneous classrooms. Increased emphasis on independent teaching. Teaching students with learning disabilities in classroom communities that ensure equitable access to important knowledge and skills. Assessing academic and social outcomes.

502B. Internship in Teaching Diverse Learners II: Emotional Impairment
Spring, 6(2-4) P: CEP 801A, CEP 802A, TE 501.
R: Open only to students admitted to the teacher certification program in emotional impairment or to master’s students in the Special Education major.
Not open to students with credit in CEP 502A or CEP 502B or CEP 502D or CEP 893F. C: CEP 803A concurrently, CEP 804A concurrently.
Internship in heterogeneous classrooms. Increased emphasis on independent teaching. Teaching students who are emotionally impaired in classroom communities that ensure equitable access to important knowledge and skills. Assessing academic, communication, and social outcomes.

502C. Internship in Teaching Diverse Learners II: Deaf Education
Spring, 6(2-4) P: CEP 801A, CEP 803C, TE 501.
R: Open only to students admitted to the teacher certification program in deaf education or to master’s students in the Special Education major.
Not open to students with credit in CEP 502A or CEP 502B or CEP 502D or CEP 893F. C: CEP 813C concurrently, CEP 804C concurrently.
Internship in heterogeneous classrooms. Increased emphasis on independent teaching. Teaching students who are deaf or hard of hearing in classroom communities that ensure equitable access to important knowledge and skills. Assessing academic, communication, and social outcomes.

502D. Internship in Teaching Diverse Learners II: Visual Impairment
Spring, 6(2-4) P: CEP 801A, CEP 802D, TE 501.
R: Open only to students admitted to the teacher certification program in visual impairment or to master’s students in the Special Education major.
Not open to students with credit in CEP 502A or CEP 502B or CEP 502D or CEP 893F. C: CEP 803D concurrently, CEP 804D concurrently.
Internship in heterogeneous classrooms. Increased emphasis on independent teaching. Teaching students who are blind or visually impaired in classroom communities that ensure equitable access to important knowledge and skills. Assessing academic, daily living, and social outcomes.

800. Psychology of Learning in School and Other Settings
Fall, Spring, Summer, 3(3-0)
Learning as active, socially-mediated construction of knowledge in school, home, community, and work settings. What is learned, how it is taught and learned, and what learners bring to the setting.

801. Psychological Development: Learner Differences and Commonalities
Fall, Spring, Summer, 3(3-0)
Development of differences and commonalities in learners across the lifespan. Contextual influences on development. Implications for learning in schools and other settings.
801A. Professional Role in Teaching Special Education I: Collaboration and Consultation
Fall. 3(2-3) P: TE 401. R: Open only to students admitted to the teacher certification program in special education or to master’s students in the Special Education major. Not open to students with credit in TE 801. C: CEP 802A concurrently, CEP 802C concurrently, TE 501 concurrently.
Professional and ethical responsibilities. Models and methods of collaboration with teachers, parents, and community agencies to foster learning for students with impairments. Advocacy for students with impairments in school and community settings.

802. Developing Positive Attitudes toward Learning
Fall. 3(3-0) P: CEP 800.
Behavioral, individual-difference, and cognitive perspectives on student motivation to learn.

802A. Reflection and Inquiry in Teaching Special Education I: Mild Impairment
Fall. 3(2-3) P: (CEP 301) R: Open only to students admitted to the teacher certification program in emotional impairment or learning disabilities or M.A. students in the Special Education major or Ed.S. or Ph.D. students in the School Psychology major. Not open to students with credit in CEP 802C or CEP 802D. C: TE 501 concurrently, CEP 801A concurrently.
Qualitative and quantitative research methods on teaching and learning of students with emotional or learning impairments. Framing educational problems in special education. Designing and assessing studies of mathematics and problem-solving.

802C. Reflection and Inquiry in Teaching Special Education I: Deaf Education
Fall. 3(2-3) R: Open only to students admitted to the teacher certification program in deaf education or to master’s students in the Special Education major. Not open to students with credit in CEP 802A or CEP 802D. C: CEP 801A concurrently, TE 501 concurrently.
Qualitative and quantitative research methods on teaching and learning of deaf students. Framing education problems in special education. Designing and assessing studies of language development for students who are deaf or hard of hearing.

802D. Reflection and Inquiry in Teaching Special Education I: Visual Impairment
Fall. 3(2-3) R: Open only to students admitted to the teacher certification program in visual impairment or to master’s students in the Special Education major. Not open to students with credit in CEP 802A or CEP 802C. C: CEP 801A concurrently, TE 501 concurrently.
Qualitative and quantitative research methods on teaching and learning of blind students. Framing education problems in special education. Designing and assessing studies of Braille literacy and other expected outcomes of special education.

803. Psychodynamics of Self-Concept Development and Self-Understanding
Fall, Spring, Summer. 3(3-0)

803A. Professional Role in Teaching Special Education II: Assessment of Mild Impairment
Spring. 3(2-3) P: (CEP 801A and CEP 802A and TE 501) R: Open only to students admitted to the teacher certification program in emotional impairment or learning disabilities or M.A. students in the Special Education major or Ed.S. or Ph.D. students in the School Psychology major. Not open to students with credit in CEP 803C or CEP 803D. C: CEP 502A concurrently, CEP 502B concurrently, CEP 504A concurrently.
School-agency alliances for fostering student learning. Informal and formal assessment methods for planning and evaluating instruction and for classifying and placing students who are mildly impaired. Engage with families to improve responsiveness to the assessment.

803C. Professional Role in Teaching Special Education II: Assessment of Deaf Students
Spring. 3(2-3) P: CEP 801A, CEP 802C, TE 501. R: Open only to students admitted to the teacher certification program in deaf education or to master’s students in the Special Education major. Not open to students with credit in CEP 803A or CEP 803D. C: CEP 502C concurrently, CEP 504C concurrently.
School-agency alliances for fostering student learning. Informal and formal assessment methods for diagnosing communication functions. Engage with families to improve responsiveness to the assessment of communication skills.

803D. Professional Role in Teaching Special Education II: Visual Impairment
Spring. 3(2-3) P: CEP 801A, CEP 802D, TE 501. R: Open only to students admitted to the teacher certification program in visual impairment or to master’s students in the Special Education major. Not open to students with credit in CEP 803A or CEP 803C. C: CEP 502D concurrently, CEP 504D concurrently.
School-agency alliances for fostering student learning. Informal and formal assessment methods for expected outcomes for students who are blind. Engage with families to improve responsiveness to the assessment of expected outcomes.

804. Psychology of Adolescence for Teachers
Fall. 3(3-0)
Adolescent growth with emphasis on socio-emotional and intellectual development. Impact of family, peer, and teacher relations on adolescent adjustment in and out of school.

804A. Reflection and Inquiry in Teaching Special Education II: Mild Impairment
Spring. 3(2-3) P: CEP 801A, CEP 802A, TE 501. R: Open only to students admitted to the teacher certification program in emotional impairment or learning disabilities or to master’s students in the Special Education major. Not open to students with credit in CEP 804C or CEP 804D. C: CEP 502A concurrently, CEP 502B concurrently, CEP 803A concurrently.
Collecting, analyzing and interpreting data related to the teaching and learning of literacy for students with learning or emotional impairments. Appraising and reporting results of inquiry. Developing and studying learning communities which facilitate learning for mildly impaired students.

804C. Reflection and Inquiry in Teaching Special Education II: Deaf Education
Spring. 3(2-3) P: CEP 801A, CEP 802C, TE 501. R: Open only to to students admitted to the teacher certification program in deaf education or to master’s students in the Special Education major. Not open to students with credit in CEP 804A or CEP 804D. C: CEP 502C concurrently, CEP 803C concurrently.
Collecting, analyzing and interpreting data related to teaching, learning and educational policy. Appraising and reporting results of inquiry. Designing and assessing studies of teaching practice in academic subject learning related to students who are deaf or hard of hearing.

804D. Reflection and Inquiry in Teaching Special Education II: Visual Impairment
Spring. 3(2-3) P: CEP 801A, CEP 802D, TE 501. R: Open only to students admitted to the teacher certification program in visual impairment or to master’s students in the Special Education major. Not open to students with credit in CEP 804A or CEP 804C. C: CEP 502D concurrently, CEP 503D concurrently.
Collecting, analyzing and interpreting data related to teaching, learning and educational policy. Designing and assessing teaching and learning of Braille mathematics for students who are blind. Facilitating use of low vision.

805. Learning Mathematics
Fall. 3(3-0) Interdepartmental with Teacher Education.
Learning and development of mathematical thinking and knowledge in educational settings from perspectives of psychology, anthropology, mathematics, and other disciplines. Implications for teaching.

806. Learning of Science
Fall. 3(3-0) R: Open only to graduate students in College of Education.
Psychological and epistemological perspectives underlying various approaches to science education. Instructional implications emerging from these perspectives.
807. Proseminar in Instructional Development and Educational Technology
Fall, 3(3-0)
Educational technology as applied to theory, process, and methods of instructional development, including analysis, design, implementation, and evaluation.

808. Instructional Design I
Fall, 3(3-0) P: (CEP 807) R: Open only to master's students in the Educational Technology and Instructional Design major or with departmental permission.
Goals, objectives, task description and analysis in instructional design. Evaluation as applied primarily to course and unit design.

809. Instructional Design II
Spring, 3(3-0) P: (CEP 808) R: Open only to master's students in the Educational Technology and Instructional Design major or with departmental permission.
Principles of instructional design applied to lessons. Explanation, information processing, transfer, demonstration, practice, mental set motivation. Experimentation with facts, concepts, principles and skills.

810. Teaching for Understanding with Computers
Fall, Spring, Summer, 3(3-0) P: CEP 416.
Cognitive theories applied to the design of meaningful instruction and supportive environments for adults and children learning to use computers and other technologies.

811. Adapting Innovative Technologies to Education
Fall, Spring, 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: CEP 810.
Application of instructional principles and methods to educational problems that involve modeling complex systems. Development of media and computer applications which are interactive, intelligent, multisensory, and innovative.

812. Applying Instructional Development and Educational Technology for Clients
Spring, 3(3-0) P: CEP 807.
Working with clients in using the instructional development life cycle model to analyze, design, develop, and maintain courses and instructional systems. Topics include hands-on project, consulting, writing and funding proposals, and project management.

813. Improving Student Problem Solving Skills through Technology
Fall, Spring, 3(3-0) P: CEP 416.
General problem-solving literature. Potential of technology in problem solving. Approaches to integrating technology into the teaching of problem-solving skills.

814. Emotional and Social Development of School-Age Youth
Fall, Spring, Summer, 3(3-0)
Research on emotional and social development from birth through adolescence. Personality development. Implications for teaching and learning.

815. Instructional Design III
Spring, 3(3-0) P: CEP 808, CEP 809.
Creation, implementation and evaluation of alternative instructional designs.

816. Proseminar in Psychological Bases of Literacy Instruction
Spring, 3(3-0) P: TE 840 R: Open only to graduate students in Literacy Instruction.
Psychological foundations of literacy instruction. Topics include reading models, writing models, classroom discourse, narrative, and reader response.

817. Measurement and Evaluation for Counseling and Development
Fall, Spring, Summer, 3(3-0)
Assessment of intelligence, aptitude, achievement interests, career development, work and personal values, and personality.

818. Approaches to Educational Research
Fall, Spring, Summer, 3(3-0) P: CEP 822.
Alternative methods of educational research. Identifying researchable problems in education and developing a research proposal. Applications of descriptive and inferential statistics for analyzing and critiquing published studies.

819. Evaluation of Educational Programs and Policies
Spring, 3(3-0) Interdepartmental with Teacher Education. P: CEP 822.
Qualitative and quantitative methods to assess the effectiveness of public policies and resulting educational programs. Theory and practice of program evaluation.

820. Advanced Studies in American Sign Language
Fall, 1(1-1) P: CEP 442B.
Sociocultural and linguistic issues relating to the educational use of American Sign Language with deaf children.

821. Special Education Internship: Teaching Children and Youth with Visual Impairments
Fall, Spring, 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P: (CEP 802D and CEP 803D and permission. Supervised student teaching in elementary and secondary education programs for blind and visually impaired children.

822. Special Education Internship: Teaching Deaf-Blind Children and Youth
Fall, Spring, 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P: (CEP 802D and CEP 803D and CEP 804D and CEP 443B) R: Open only to graduate students in the Special Education major. C: CEP 847B concurrently, CEP 848B concurrently.
Supervised student teaching in elementary and secondary education programs for deaf-blind students.

823. Techniques of Orientation and Mobility I
Fall, Spring, 3(1-4) P: (CEP 457) R: Open only to master's students in the Special Education major whose area of emphasis is orientation and mobility, or orientation and mobility teaching.
Methods of orientation and navigation related to blindness. Structure, function, and problems with the proprioceptive system in relation to orientation and mobility.

824. Techniques of Orientation and Mobility II
Fall, Spring, 3(1-4) P: (CEP 457) R: Open only to master's students in the Special Education major.
Advanced techniques and methods for negotiating the range of outdoor environments from rural and residential to complex business areas. Simulations under blindfold and low vision conditions.

825. Special Education Law
Fall of even years, 3(3-0) Interdepartmental with Educational Administration. R: Open only to seniors or graduate students.
Analysis of State and Federal regulations, guidelines and court decisions related to special education and examination of their impact.

826. Independent Study: Education of Deaf Learners
Fall, Spring, 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students in College of Education.
Directed individual study related to educating students who are deaf or hard of hearing.

827. Stress Management
Fall, Spring, 3(3-0)
Physiological and psychological foundations of the human stress response. Therapeutic approaches to stress management.

828. Perspectives in Multicultural Counseling
Summer, 3(3-0)
Impact of health, socio-cultural, economic, educational, legal, and vocational issues on the delivery of counseling service to diverse populations. Utilization process in both institutional and personal change.

829. Counseling Theory, Philosophy, and Ethics
Fall, Summer, 3(3-0) R: Open only to graduate students in Counseling, Rehabilitation Counseling, and School Psychology.
Selected counseling theories. Foundations of ethical decision-making. Professional standards, guidelines, and issues concerning the training and work of the counselor and school psychologist. Legal issues and precedents.

830. Introduction to Individual and Group Counseling
Fall, Spring, 3(3-0) R: Open only to graduate students in the College of Education, College of Human Ecology, or School of Social Work.
Forming, working with, and ending groups. Building relationships. Handling obstacles. Developing and carrying out agendas in counseling. Simulated individual and group practice.
863. Counseling and Consulting Models and Strategies
Spring, 3(3-0) P: CEP 861, CEP 862. R: Open only to graduate students in Counseling, Rehabilitation Counseling, School Psychology.
Models and strategies for working with children, adolescents, and adults in counseling and consulting roles. Developing working relationships, assessing problems, setting goals, planning treatments, and evaluating outcomes.

864. Career Counseling
Spring, 3(3-0) R: Open only to graduate students in Education.
Career development theories and labor market and occupational information. Assessing and planning aspects of career counseling with various populations.

865. Assessment and Research in Counseling
Spring, 3(3-0) P: (CEP 821 and CEP 861 and CEP 862)
Supervised training and practice in mental health testing assessment, and use of the DSM-IV.

870. Foundations of Rehabilitation Counseling
Fall, 3(3-0) R: Open only to master’s students in the Rehabilitation Counseling major.
History, philosophy, values, legislation, policy and practice of the field of rehabilitative counseling.

871. Medical and Psychological Aspects of Disability
Fall, 3(3-0)
Types of physical, cognitive and emotional disabilities and their implications for vocational rehabilitation. Psychosocial adjustments to chronic disease and disability.

872. Social and Environmental Aspects of Rehabilitation
Spring, 3(3-0)
Social and political factors that handicap individuals with disabilities. The Independent Living movement, philosophy, legislation and services. Accommodations and enabling technology. Attitude modification and client empowerment.

873. Employment Strategies for Individuals with Disabilities
Fall, 3(3-0)
Public policy, resources, and intervention strategies for assisting persons with disabilities to adapt to the work-place and to achieve vocational outcomes. Assisting employers in accommodating and retaining employees with disabilities.

874. Habilitation Strategies
Summer, 3(3-0)
Historical, legislative, theoretical, and operational aspects of the transition from school to work for youth with congenital, developmental, and other severe disabilities.

875. Substance Abuse and Treatment
Summer, 3(3-0)
Physical, intellectual, social, and psychological effects of chemical use and abuse. Assessment tools and strategies for therapeutic intervention.

876. Professional Issues in Rehabilitation Counseling
Spring, 3(3-0) P: CEP 870, CEP 883A concurrently. R: Open only to Master’s students in Rehabilitation Counseling.
Applications of case management strategies, processes and practices in rehabilitation counseling.

877. Vocational Assessment and Research in Rehabilitation
Fall, 3(3-0) P: CEP 821, CEP 870. R: Open only to master’s students in Rehabilitation Counseling and doctoral students in Rehabilitation Counseling and School Counseling. Advanced assessment techniques and strategies for rehabilitation settings. Applied research and program evaluation in rehabilitation counseling.

880. Individual Measurement: The Binet and Wechsler Scales
Fall, 3(3-0) P: (CEP 821) R: Open only to Ed.S. or Ph.D. students in the School Psychology or Counseling Psychology major.

881. Personality Assessment
Spring, 3(3-0) P: CEP 821 and CEP 885 and PSY 475 R: Open only to Ed.S. or Ph.D. students in the School Psychology major.
Projective and objective personality assessment of children and adolescents in school.

882. Seminar in Counseling, Educational Psychology and Special Education (MTC)
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
Seminar in the various fields of emphasis in Counseling, Educational Psychology and Special Education.

883. Psychology of Classroom Discipline
Summer, 3(3-0) R: Teaching experience.
Theories of and strategies for the resolution of classroom discipline problems.

884. Roles and Functions of School Psychologists: Focus on Consultation
Spring of odd years, 3(3-0) P: (CEP 801 and CEP 821 and CEP 880) R: Open only to Ed.S. or Ph.D. students in the School Psychology major.
Multiple roles of school psychologists from a systems perspective. Emphasis on consultation strategies for working with schools and families. Historical, legal, ethical, and cultural issues.

885. Behavior Disorders in Children
Fall, 3(3-0) P: 12 graduate credits in Educational Psychology or related area. Not open to students with credit in PST 853 or PSY 854.
Characteristics, causes, and treatment of school-related behavior disorders in children within a developmental framework.

890. Independent Study
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course.
Individual or group study guided by a faculty member.

893A. Rehabilitation Counseling Internship
Fall, Spring, Summer. 3 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. P: CEP 894A R: Open only to master’s students in the Rehabilitation Counseling major.
Supervised internship experience in community rehabilitation settings.

893C. Counseling Internship
Spring, 3 to 12 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P: (CEP 894C) R: Open only to Ed.S. or Ph.D. students in the School Psychology major.
Supervised experience in the practice of school psychology. Diagnostics, consultation and intervention.

895F. Special Education Internship: Teaching Children with Learning Disabilities
Fall, Spring, 4 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. P: (CEP 803A) R: Open only to graduate students in the Special Education major.
Supervised student teaching in elementary and secondary education programs for deaf or hearing impaired students.

895G. Special Education Internship: Teaching Children with Emotional Impairments
Fall, Spring, 4 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. P: (CEP 803A) R: Open only to graduate students in the Special Education major.
Supervised student teaching in elementary and secondary programs for emotionally impaired students.
894A. Rehabilitation Counseling Practicum  
Fall, Summer. 6(3-12) P: CEP 862. R: Open only to master’s students in the Rehabilitation Counseling major.  
Supervised practicum in a rehabilitation or human services setting.

894B. School Psychology Practicum  
Fall, Spring. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: CEP 885 R: Open only to graduate students in the School Psychology major. C: CEP 884 concurrently.  
Administration and interpretation of individual scales. Report writing. Consultation and team decision making.

894C. Counseling Practicum  
Fall, Spring. 6(3-12) P: CEP 863. R: Open only to master’s students in Counseling.  
Supervised counseling experience in schools or agency. Analysis and critique of these experiences through group and individual consultation with the instructor.

894D. Practicum in Educational Psychology  
Fall, Spring. Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: CEP 880, CEP 801. R: Open only to graduate students in the Educational Psychology major. C: CEP 884 concurrently.  
Practicum in educational, business, or consulting settings. Possible projects include designing, developing, implementing, or evaluating instructional programs; conducting research; or working with practitioners to incorporate innovative instructional technologies.

894E. Special Education Practicum: Children and Youth in Orientation and Mobility  
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. P: CEP 857B and CEP 857C R: Open only to graduate students in the Special Education major.  
Supervised field experience in teaching independent travel to visually impaired and blind students in elementary and secondary education programs.

894F. Special Education Practicum: Children and Youth with Learning Disabilities  
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in the Special Education major. C: CEP 802A concurrently. CEP 894A concurrently.  
Supervised field experience with students who have learning disabilities. Planning, implementing, and critiquing instruction in elementary and secondary school settings.

894H. Special Education Practicum: Children and Youth with Emotional Impairments  
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in the Special Education major.  
Supervised field experience with students who have emotional impairments. Planning, implementing, and critiquing instruction in elementary and secondary school settings.

894I. Special Education Practicum: Children and Youth in Deaf Education  
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. P: (CEP 440) or concurrently R: Open only to graduate students in the Special Education major.  

895. Research Ethics  
Summer. 1(1-0) Interdepartmental with Kinesiology; Teacher Education; and Educational Administration; Administered by Kinesiology. R: Open only to graduate students in the Department of Counseling, Educational Psychology and Special Education or Department of Educational Administration or Department of Kinesiology or Department of Teacher Education.  
Identifying and resolving ethical problems in research, including issues related to collegial interactions; authorship, publication, and reviewing practices; data management; ownership of data and intellectual property; conflicts of interest; protection of human and animal subjects; and lab safety and compliance.  
SA: PES 895

899. Master’s Thesis Research  
Fall, Spring, Summer. 1 to 9 credits. A student may earn a maximum of 15 credits in all enrollments for this course.

900. Proseminar in Educational Psychology I  
Fall. 3(3-0) R: Open only to Ph.D. students in Counseling, Educational Psychology, and Special Education.  
Historical, theoretical, empirical, methodological, and philosophical issues. Research literature on learning, teaching subject matter, and social-cultural contexts.

901. Proseminar in Educational Psychology II  
Spring. 3(3-0) P: CEP 890. R: Open only to Ph.D. students in Counseling, Educational Psychology and Special Education.  
Further work on historical theoretical, empirical, methodological, and philosophical issues. Research literature on learning, teaching subject matter, and social-cultural contexts.

902. The Psychology of Learning School Subjects  
Spring. 3(3-0) R: Open only to Ph.D. students in the College of Education.  
Psychological theories and research regarding learning and teaching of school subjects, including mathematics, science, and reading. Psychological learning contexts in and out of school. Transfer and representation of knowledge.

903. Cognitive Development across the Lifespan  
Fall. 3(3-0) P: CEP 891. R: Open only to Ph.D. students in Education.  
Development of thinking skills in learning across the lifespan from three theoretical perspectives. Relationship between cognitive development and learning in schools and other contexts.

904. Social-Emotional Development across the Lifespan  
Spring. 3(3-0) P: CEP 890 or CEP 903. R: Open only to Ph.D. students in the College of Education.  
Qualitative and quantitative measurement of changes in emotional, and social aspects of human development.

905. Cultural Perspectives on Learning and Development  
Spring of even years. 3(3-0) P: CEP 809, CEP 801. R: Open only to graduate students in the College of Education.  
Theories and research in cultural psychology. Relations among culture, learning, and human development in school and other settings such as family, community, and work. Implications for educational practice.

906. Sociocultural Bases of Cognition and Education  
Fall of even years. 3(3-0) R: Open only to Ph.D. students in Education.  
Social and cultural-historical mediation of human cognition. Emphasis on the formative role of educational contexts in influencing both what and how we think, feel, and act.

907. Psychological Study of Teaching  
Fall of odd years. 3(3-0) Interdepartmental with Teacher Education. R: Open only to Ph.D. students in Education.  
Research literature on psychological aspects of teachers and teaching. Topics include teacher's decision-making, learning from experience and developmental changes.

908. Instructional Theories  
Spring of odd years. 3(3-0) P: CEP 809. R: Open only to graduate students in Educational Psychology.  

909. Cognition and Technology  
Spring. 3(3-0) R: Open only to Ph.D. students in College of Education.  
Technology in education. Theories and research on cognition and technology. Epistemological, social, ethical, and policy issues raised by technology. Computer as metaphor for mind. Representational systems.

910. Current Issues in Motivation and Learning  
Spring of even years. 3(3-0) R: Open only to Ph.D. students in Education.  
Enduring questions about motivation and learning. Role of skill versus will in motivation. Higher-order thinking in learning.

912. Psychology and Pedagogy of Literacy  
Fall of even years. 3(3-0) Interdepartmental with Teacher Education. R: Open only to doctoral students in College of Education, College of Arts and Letters, and College of Social Science.  
Psychological, historical, and methodological foundations of research and practice in literacy instruction.
913. Psychology and Pedagogy of Mathematics
Fall of odd years. 3(3-0) Interdepartmental with Teacher Education. P: CEP 902. R: Open only to Ph.D. students in College of Education.
Psychological theory and research on the learning of mathematics. Development of mathematical thinking and knowledge in school and other settings.

914. Psychology and Pedagogy of Science
Spring of odd years. 3(3-0) Interdepartmental with Teacher Education. P: CEP 902. R: Open only to Ph.D. students in College of Education.
Psychological and epistemological aspects of learning and teaching science.

915. Language, Literacy and Learning
Spring of even years. 3(3-0) Interdepartmental with Teacher Education. R: Open only to Ph.D. students in College of Education.
Role of language in mediating cognition, affect, and action in educational contexts. Relationship between oral and written discourse and sociocultural contexts.

916. Technology and Education
Fall of even years. 3(3-0) R: Open only to doctoral students in College of Education.
Diffusion of instructional technology in schools and other settings. Evaluation of effects of technology. Policy issues, including technology for special populations. Case studies of technology use in institutions.

917. Current Applications in Educational Technology
Fall of odd years. 3(3-0) R: Open only to Ph.D. students in the College of Education.
Recent developments in educationally relevant applications of computers and other instructional media. Case studies of innovative uses of technologies in schools and universities.

918. School-Based Psychological Interventions
Spring of odd years. 3(3-0) P: (CEP 885 or concurrently) R: Open only to Ed.S. or Ph.D. students in the School Psychology major.
Direct and indirect strategies focusing on children, teachers, administrators, programs and organizations. Topics include prereferral interventions, group interventions in schools, and peer-oriented interventions.

919. Current Research and Issues in School Psychology
Spring of even years. 3(3-0) R: Open only to Ed.S. or Ph.D. students in the School Psychology major.
Rotating topics include role function, diagnosis and eligibility concerns, innovative educational and behavioral interventions.

920. Educational Assessment
Fall. 3(3-0) R: Open only to doctoral students in College of Education, College of Human Ecology, and College of Social Science.
Teacher-made and standardized techniques for measuring achievement. Topics include grading, policy issues, affective assessment, and performance measurement.

921. Psychometric Theory I

922. Psychometric Theory II
Fall of odd years. 3(3-0) P: CEP 921; one statistics course. R: Open only to Ph.D. students.
Expansion of generalizability theory, test and item bias, and equating. Measurement of change, profile analysis, scaling approaches, and validity generalization.

923. Item Response Theory
Spring of odd years. 3(3-0) P: CEP 921; CEP 932. Item response theory applied to test construction, scaling, and equating tests and their items.

924. Educational Data and the Law
Fall of even years. 3(3-0) P: CEP 821 or CEP 824 or CEP 920.
Educational and policy perspectives on assessment-related legal cases and the use of statistical evidence in legal arguments. Topics include teacher licensure, diploma sanction tests, discrimination challenges, and due process.

925. Educational Inquiry
Fall. Spring. 4(4-0) Interdepartmental with Teacher Education.
Alternative approaches to educational research: quantitative, interpretive, and customized. Theoretical assumptions, sources of questions, data collection and analysis, and rhetoric.

926. Qualitative Methods in Educational Research
Fall. 4(4-0) Interdepartmental with Teacher Education; and Educational Administration. Administered by Teacher Education. P: CEP 930. R: Open only to doctoral students. Approval of department.
Multiple traditions of qualitative research in education. Approaches to theory, research questions, and design, data collection and analysis, and reporting. Ethical issues. Appraising qualitative research.

927. Quantitative Methods in Educational Research
Fall. Spring. 4(4-0) Interdepartmental with Teacher Education. P: CEP 822 or PES 871 or CEP 930. One introductory research design or statistics course. R: Open only to graduate students in the College of Education or College of Agriculture and Natural Resources or College of Human Ecology.
Techniques of data analysis and statistical inference used in educational and psychological research. Multiple regression, analysis of variance, and basic principles of experimental design in educational applications.

928. Advanced Topics in Multivariate Data Analysis I
Fall. 4(4-0) P: CEP 933. R: Open only to doctoral students in College of Education, College of Agriculture and Natural Resources, and College of Human Ecology.
Application of discrete and continuous multivariate methods in educational research.

929. Synthesis of Educational Research
Spring of even years. 4(4-0) P: CEP 932. R: Open only to Ph.D. students.
Synthesis and meta-analysis in educational research.

930. Survey Research Methods in Education
Spring of even years. 4(4-0) P: CEP 824, CEP 920. R: Open only to graduate students in the College of Agriculture and Natural Resources or College of Education or College of Human Ecology.

931. Seminar in Educational Measurement
Fall of even years. 3(3-0) P: CEP 921. R: Open only to doctoral students in College of Education.
Topics include ethics and standards in testing, school effectiveness indices, and parameters of teacher testing.
994C.  Advanced Practicum in Counseling Psychology  
Spring, 3(0-3)  P: (CEP 994B)  R:  Open only to Ph.D. students in the Counseling Psychology major.  
Client conceptualization, assessment, intervention design, ethical and professional development issues, supervision, and consultation.

995.  Practicum in Research Design and Data Analysis  
Fall, Spring, Summer. 1 to 4 credits.  P: CEP 932, R: Open only to Ph.D. students in College of Education.  
Supervised research practicum. Design, execution, analysis, presentation, critique, and revision of research projects.

999.  Doctoral Dissertation Research  
Fall, Spring, Summer. 1 to 24 credits.  A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to Ph.D. students.

CRIMINAL JUSTICE  CJ  
School of Criminal Justice  
College of Social Science

110.  Introduction to Criminal Justice  
Fall, Spring, Summer. 4(4-0)  
Description and analysis of agencies and processes involved in administration of justice in the United States.

210.  Introduction to Forensic Science  
Spring. 4(4-0)  

220.  Criminology  
Fall, Spring. 4(4-0) Interdepartmental with Sociology. P: (CJ 110 or SOC 100) R: Open only to students in the Criminal Justice or Sociology major or approval of school.  

294.  Criminal Justice Professionals  
Fall, Spring, Summer. 2(1-2) P: (CJ 110 and CJ 220) and one additional CJ course. R: Open only to sophomores or juniors or seniors in the School of Criminal Justice.  

335.  Police Process  
Fall, Spring. 4(4-0) P: (CJ 292) R: Open only to juniors or seniors in the Criminal Justice major.  
Roles, responsibilities, issues, and trends pertinent to contemporary law enforcement organizations in contemporary society.

355.  Juvenile Justice Process  
Fall, Spring, Summer. 4(4-0) P: (CJ 220) R: Open only to juniors or seniors in the Criminal Justice major.  
The juvenile justice system and law. Theories of juvenile delinquency and deviance. Sociological, psychological, and anthropological perspectives.

365.  Corrections Process  
Fall, Spring, Summer. 4(4-0) P: (CJ 292) R: Open only to juniors or seniors in the Criminal Justice major.  
Historical and contemporary views of offender management and treatment. Corrections system operation. Effects of institutionalization. Alternatives to incarceration.

375.  Criminal Law Process  
Fall, Spring. 4(4-0) P: (CJ 292) RB: (CJ 110) R: Open only to juniors or seniors.  
Administration of criminal law. Investigation, prosecution, adjudication, and sentencing. Constitutional safeguards and legal controls on official action.

385.  Introduction to Private Security  
Fall. 3(3-0) R: Not open to freshmen or sophomores.  
Relationships of private protective services with public law enforcement. Individuals, businesses, and governments providing prevention, protection, investigation and disaster recovery services. Protection of persons, property, and information.

400H.  Honors Study  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Honors College seniors and approval of school.  
Faculty-supervised group or individual study dealing with a phase of the criminal justice system.

421.  Minorities, Crime, and Social Policy  
Spring of odd years. 3(3-0) P: (CJ 110 or SOC 100) R: Open only to juniors or seniors.  
A socio-historical analysis of the effects of race and ethnicity on legitimate social opportunities, criminal behavior, victimization, and differential judicial processing. Analysis of the impact of assimilation and acculturation on criminal behavior, victimization, and criminal justice processes.

425.  Women and Criminal Justice  
Spring of even years. 3(3-0) Interdepartmental with Women's Studies. P: (CJ 220 or WS 201) R: Open only to juniors or seniors.  
Theories on women's victimization and criminality. Women's experiences as victims, offenders, and criminal justice employees. Laws and their effects on the rights of women in the criminal justice system.

432.  Community Policing  
Fall, Spring. 3(3-0) P: (CJ 335) CJ 335. R: Open only to juniors or seniors in the Criminal Justice major.  
Community policing philosophy, applications, issues, and contemporary research. Community policing models.

433.  Law Enforcement Intelligence Operations  
Spring. 3(3-0) P: (CJ 335) R: Open only to juniors or seniors in the Criminal Justice major.  
Law enforcement intelligence as an analytic tool for case development and resource allocation. Historical, ethical, legal, and operational issues affecting current practice.

434.  Police Administration (W)  
Fall. 3(3-0) P: Completion of Tier I writing requirement. (CJ 335) R: Open only to juniors or seniors in the Criminal Justice major.  
Organizational theory, leadership, communications, and labor relations in police administration. Historical and legal perspectives.

435.  Investigation Procedures  
Fall, Spring. 3(3-0) P: (CJ 375) R: Open only to juniors or seniors in the Criminal Justice major.  

455.  Delinquency and Treatment Approaches  
Spring. 3(3-0) P: (CJ 355) R: Open only to juniors or seniors in the Criminal Justice major.  
Investigation and evaluation of delinquency. Prevention programs and treatment approaches. Implementation and assessments of correctional and community intervention strategies in agency settings.

456.  Criminal Careers and Career Criminals (W)  
Spring. 3(3-0) P: Completion of Tier I writing requirement. (CJ 355 or CJ 365) R: Open only to seniors in the Criminal Justice major.  

465.  Correctional Programming and Analysis  
Spring. 3(3-0) P: (CJ 355 or CJ 365) R: Open only to juniors or seniors in Criminal Justice.  
Contemporary institutional and community corrections programs. Research on adult and juvenile crime prevention, diversion, and treatment programs.