Selected Topics
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to Computer Science majors. Approval of department. SA: CPS 891

Master's Project
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to Computer Science majors. Approval of department. SA: CPS 898

Master's Thesis Research
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open only to Computer Science majors. Approval of department. SA: CPS 899

Selected Topics in Recognition by Machine
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: (CSE 802 and CSE 803) R: Open only to Computer Science or Electrical Engineering majors. SA: CPS 902

Advanced topics in pattern recognition and computer vision such as Markov random fields, modeling and recognition of three dimensional objects, and integration of visual modules.

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. R: (CSE 812 and CSE 812) R: Open only to Computer Science or Electrical Engineering majors. SA: CPS 910

Advanced topics and developments in high-bandwidth computer networks, protocol engineering, and distributed computer systems.

Formal Methods in Software Development
Fall. 3(3-0) P:M: (CSE 814) RB: Undergraduate courses in software engineering and in logic. R: Open only to students in the Department of Computer Science and Engineering. SA: CPS 914

Current research in selected areas of software engineering such as: approaches for the incorporation of formal methods in software development; current projects using formal methods in software engineering; object-oriented analysis and development techniques; and approaches for the incorporation of user-interface analysis and design in software development.

Selected Topics in High Performance Computer Systems
Spring of odd years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P:M: (CSE 822) R: Open only to Computer Science and Engineering majors or approval of Department. SA: CPS 920

Design of high performance computer systems. Seminar format.

Advanced Topics in Digital Circuits and Systems
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Electrical and Computer Engineering. Administered by Department of Electrical and Computer Engineering. SA: EE 921


Embedded Architectures
Fall of odd years. Spring of odd years. 3(3-0) Interdepartmental with Electrical and Computer Engineering. Administered by Department of Electrical and Computer Engineering. RB: (ECE 809 and ECE 813) SA: EE 921B


Electronic Systems Packaging
Fall of odd years. Spring of odd years. 3(3-0) Interdepartmental with Electrical and Computer Engineering. Administered by Department of Electrical and Computer Engineering. RB: (ECE 809 and ECE 813) SA: EE 921C

VLSI packaging technology, thermal management, electrical design, switching noise, multi-chip packaging, materials, device assembly, RF device packaging, and electrical testing.

Selected Topics in Artificial Intelligence
Fall. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. RB: (CSE 841) R: Open only to Computer Science or Electrical Engineering majors. SA: CPS 941

Topic such as second generation expert systems, human factors, natural language processing, speech understanding, neural networks, genetic algorithms and opportunistic planning.

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. RB: (CSE 830 and CSE 860) R: Open only to graduate students in the Department of Computer Science and Engineering. Approval of department. SA: CPS 960

Current research in the general theory of algorithms and computational complexity.

Selected Topics in Database Systems
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. RB: (CSE 880) R: Open only to Computer Science or Electrical Engineering majors. SA: CPS 980

Recent developments in areas such as distributed and parallel database systems, object oriented database systems, knowledgebase and expert database systems.

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. R: Open only to Computer Science majors. Approval of department. SA: CPS 999

Doctoral dissertation research.

COUNSELING, EDUCATIONAL PSYCHOLOGY, AND SPECIAL EDUCATION

Department of Counseling, Educational Psychology, and Special Education

College of Education

Reflections on Learning
Fall, Spring, Summer. 3(3-0) Interdepartmental with Teacher Education. Administered by Department of 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.

Diverse Learners in Multicultural Perspective
Fall, Spring, Summer. 3(2-2) Interdepartmental with Teacher Education. Not open to students with credit in TE 250. Communicative, linguistic, physical, sensory, behavioral, affective, and cognitive differences in learning in multicultural classrooms. Factors that mediate access to knowledge.

Dynamics of Personal Adjustment
Fall, Spring, Summer. 3(3-0) Psychological theories of human adjustment. Implications for effective learning, self-development, and adaptation.

Substance Abuse
Fall, Spring. 3(3-0)

Effects of mood-altering chemicals. Treatment approaches and resources. Special emphasis on adolescent users.

Introduction to Students With Mild Impairments (W)
Spring. 3(2-2) P:M: Completion of Tier I writing requirement. R: Open only to students admitted to the teacher certification program in emotional impairment or learning disabilities.

Learning and emotional impairments. Characteristics, causes, educational approaches, theories, and issues pertaining to students with mild impairments.
341 American Sign Language and the Deaf Community
Fall, Spring, Summer. 2(2-0)
Orientation to deaf culture. Essential signing for those expecting to have intermittent contact with deaf adults.

416 Teaching and Learning With Technology
Fall, Spring, Summer. 3(3-0) R: Open only to juniors or seniors or graduate students in the College of Education.
Uses of technology in teaching and learning. Major emphasis on developing plans for implementing and evaluating uses of technology in the classroom setting.

440 Introduction to Educating Deaf Children (W)
Fall, 3(2-2) P:M: Completion of Tier I writing requirement. RB: (CEP 442B) R: Open only to students admitted to the teacher certification program in deaf education or to master's students in the special education major. SA: CEP 840
Political, social, methodological, historical, philosophical, and legal issues in educating deaf children and youth.

441A American Sign Language I
Fall, Spring, Summer. 3(3-0) P:M: (CEP 341) 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:M: (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.

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

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

443A Braille Literacy I
Fall, 3(1-4) R: Open only to undergraduate students in the Special Education major whose major 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:M: (CEP 443A) R: Open only to undergraduate students in the Special Education major whose major 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:M: 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) R: (CEP 443A 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 Special Education major. SA: CEP 845
Technological adaptations for communication, including low technology and high technology, and innovative uses for common devices.

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

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.

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

456A Deaf-Blind Children and Youth in Elementary and Secondary Education
Fall, 4(3-2) R: (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. SA: CEP 856A
Assessing and teaching deaf-blind students. Sensory skills, behavior management and modification, language, communication and independent living.

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. SA: CEP 857A
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.

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(3-0) 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.

480 Practicum Experience with Deaf Students
Spring, 1(0-5) P:M: (CEP 440)
Field placement experience in a self-contained classroom of deaf and hard-of-hearing students.

502A Internship in Teaching Diverse Learners II: Learning Disabilities
Spring, 6(2-24) RB: (CEP 801A and CEP 802A and 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 502D or CEP 893F. C: CEP 803C concurrently and 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(2-24) RB: (CEP 801A and CEP 802A and 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 502C or CEP 502D or CEP 893F. C: CEP 803A concurrently and 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 and social outcomes.

502C Internship in Teaching Diverse Learners II: Deaf Education
Spring, 6(2-24) RB: (CEP 801A and CEP 802C and 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 803C concurrently and 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.
Counseling, Educational Psychology and Special Education—CEP

502D Internship in Teaching Diverse Learners II: Visual Impairment
Spring. 6(2-2-4) RB: (CEP 801A and CEP 802D and 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 502C or CEP 848B. C: CEP 803D concurrently and CEP 804D concurrently.

Internship in heterogenous 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) RB: (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 or CEP 802C concurrently) and (TE 501 concurrently). Professional and ethical responsibilities. Models and methods of collaboration with teachers, parents, and community groups. Advocacy for students with impairments. Advocacy for students with impairments in school and community settings.

802 Developing Positive Attitudes toward Learning
Fall. 3(3-0) RB: (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) RB: (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 802A or CEP 802D. C: TE 501 concurrently and 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 and 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 and 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) RB: (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 or CEP 502B concurrently) and (CEP 804C 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) RB: (CEP 801A and CEP 802C and 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 and CEP 804C 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) RB: (CEP 801A and CEP 802D and 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 and CEP 804D 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) RB: (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 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 or CEP 502B concurrently) and (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) RB: (CEP 801A and CEP 802C and 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 804A or CEP 804D. C: CEP 502C concurrently and CEP 803D 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) RB: (CEP 801A and CEP 802D and 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 and CEP 503D concurrently.

Collecting, analyzing and interpreting data on teaching, learning and educational policy. Appraising and reporting results of inquiry. Designing and assessing teaching and learning of Braille mathematics for students who are blind. Facilitating use of low vision.
Counseling, Educational Psychology and Special Education—CEP

859 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.

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

860A 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.

861 Counseling Theory, Philosophy, and Ethics
Fall. 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.

862 Introduction to Individual and Group Counseling
Fall, Spring. 3(3-0) R: Open only to graduate students in Counseling, Rehabilitation Counseling, and School Psychology. 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) RB: (CEP 861 and 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-M: (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 Transition from School to Adult Life for Students with Disabilities
Summer. 3(3-0) Historical, legislative, theoretical, and operational aspects of the transition from school to adult life for students with 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) RB: (CEP 870 and CEP 893A or 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) RB: (CEP 821 and 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 Cognitive Assessment
Fall. 3(3-0) RB: (CEP 821) R: Open only to Ed.S. or Ph.D. students in the School Psychology or Counseling Psychology major. Measurement of intelligence. Observation, practice, supervision, interpretation, and report writing in an educational setting.

881 Personality Assessment
Spring. 3(3-0) RB: (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
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 and strategies for the resolution of classroom discipline problems.

884 Roles and Functions of School Psychologists
Spring of odd years. 3(3-0) RB: (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. Historical, legal, ethical, and cultural issues.

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

886 Psychological Assessment and Intervention I
Fall. 3(2-3) R: Open only to Ed.S. or Ph.D. students in the School Psychology major. Conceptual and legal definitions of high-incidence disabilities. Psychological and educational assessments and interventions for learning, behavioral, and developmental problems of children and adolescents. Problem-solving assessment model. Informal and formal assessment methods. Eligibility determinations for special education.

887 Psychological Assessment and Intervention II
Spring. 3(2-3) P-M: (CEP 886) R: Open only to Ed.S. or Ph.D. students in the School Psychology major. Assessment and remediation of learning and developmental problems of children and adolescents. Major methods of assessment and remediation of learning problems. Assessments and interventions for low-incidence disabilities.

888 Theories of Child Psychotherapy
Spring. 3(2-3) P-M: (CEP 885) R: Open only to Ed.S. or Ph.D. students in the School Psychology major. Models of psychotherapy for children and adolescents. Empirically-supported, brief models appropriate for school and community-based practice. Critical appraisal of models, methods, and selected techniques.

889 Consultation in School Psychology
Spring. 3(3-0) P-M: (CEP 884 and CEP 880 and CEP 881 and CEP 887 and CEP 888) R: Open only to Ph.D. and Ed. Specialist students in the School Psychology major. School-based consultation, theoretical models and consultation skills. Communication and interpersonal skills, conflict management and, joint problem-solving, Ethical issues. Research on consultation.
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. RB: (CEP 894A) R: Open only to master's students in the Rehabilitation Counseling major. Supervised internship experience in community rehabilitation settings.

893B Internship in School Psychology
Fall, Spring. 3(3-20) A student may earn a maximum of 15 credits in all enrollments for this course. P:M: (CEP 894C) Application and integration of knowledge and skills in counseling individuals and groups in schools and agencies. Assessment, intervention, and evaluation of outcomes in field settings.

893C Counseling Internship
Spring. 3 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. C: CEP 802A concurrently and CEP 801A and CEP 802C R: Open only to graduate students in the Department of Educational Psychology and Special Education. Supervised experience in the practice of school psychology. Diagnostics, consultation and intervention.

893D Special Education Internship: Teaching Deaf Children and Youth
Fall, Spring. 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course. RB: (CEP 800 and CEP 801) R: Open only to graduate students in the Special Education major. Supervised student teaching in elementary and secondary programs for deaf or hearing impaired students.

893F 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. RB: (CEP 803A) R: Open only to graduate students in the Special Education major. Supervised student teaching in elementary and secondary education programs for learning disabled students.

893G 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. RB: (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) RB: (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. RB: (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) RB: (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. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (CEP 800 and 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. RB: (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. A student may earn a maximum of 15 credits in all enrollments for this course. RB: (CEP 802A) and CEP 802B concurrently. Supervised field experience with students who have learning disabilities. Planning, implementing, and critiquing instruction in elementary and secondary school settings.

894G 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.

894H 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. RB: (CEP 440 or concurrently) R: Open only to graduate students in the Special Education major. Supervised field experience with deaf and hard-of-hearing students. Planning, implementing, and critiquing instruction in elementary and secondary school settings.

895 Research Ethics
Summer. 1(1-0) Interdepartmental with Kinesiology; Teacher Education; Educational Administration. Administered by Department of 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. SA: PES 895 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.

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. R: Open only to master's students in the Department of Counseling, Educational Psychology and Special Education. Master's thesis research.

900 Proseminar in Learning, Technology, and Culture
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.

901A Proseminar in Learning and Development
Spring. 3(3-0) P:M: (CEP 900) R: Open only to Ph.D. students in Counseling, Educational Psychology and Special Education. SA: CEP 901 Historical theoretical, empirical, methodological, and philosophical issues. Research literature on learning and development in educational settings.

901B Proseminar in Technology and Education
Spring. 3(3-0) P:M: (CEP 900) R: Open only to Ph.D. students in Learning, Technology, and Culture. Historical, theoretical, empirical, methodological and philosophical issues. Research literature on technology in education.

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.
934 Multivariate Data Analysis I
Fall. 4(4-0) RB: (CEP 933) R: Open only to doctoral students in College of Education, College of Agriculture and Natural Resources, and College of Human Ecology. Multivariate methods, matrix algebra, and the general linear model as applied to educational research settings.

935 Advanced Topics in Multivariate Data Analysis II
Spring of even years. 4(4-0) RB: (CEP 934) 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.

936 Synthesis of Educational Research
Spring of odd years. 4(4-0) RB: (CEP 933) R: Open only to Ph.D. students. Synthesis and meta-analysis in educational research.

937 Survey Research Methods in Education
Spring of even years. 4(3-3) RB: (CEP 933) R: Open only to graduate students in the College of Agriculture and Natural Resources or College of Education or College of Human Ecology. Principles and techniques of survey research methodology. Alternative sampling designs. Development of scales and questionnaires. Data analysis procedures. Emphasis on applications in education.

940 Policy Analysis of Trends in Special Education
Spring of odd years. 3(3-0) R: Open only to doctoral students in the Special Education major or approval of department. Economic, social, legal and organizational trends in special education within the theoretical framework of organizational change.

941 Academic Issues in Special Education for At-Risk Students
Fall of odd years. 3(3-0) R: Open only to doctoral students in the Special Education major. Academic assessment and instructional research in special education. Inquiry in special education related to the design and evaluation of academic programs for learning disabled, mentally retarded, emotionally impaired, and other low achieving students.

942 Educational Perspectives on Low-Incidence Populations in Special Education
Fall of even years. 3(3-0) R: Open only to doctoral students in Special Education in College of Education. Practice and policy relating to the educational consequences of low-incidence disabilities. Emphasis on deafness, blindness, deaf-blindness, and multiple/severe disability. Placement and accommodation issues in integrated educational settings.

943 Multicultural Issues in Special Education
Fall of odd years. 3(3-0) R: Open only to doctoral students in the Special Education major. Relationships among race, gender, culture, social class, and disability. Individual, group and societal responses to disability. Anthropological, social and psychological theories about origins of cultural diversity.

944D Practicum in Counselor Education
Fall, Spring. 3(1-6) A student may earn a maximum of 15 credits in all enrollments for this course. R: Open only to Ph.D. students in the Counselor Education or Rehabilitation Counseling Education major. Theory and supervised teaching in counseling and supervising prospective counselors. Approaches, models, and strategies.

949 Critical Issues in Special Education
Spring of even years. 3(3-0) RB: (CEP 901A) R: Open only to doctoral students in Special Education. Topics in special education, including cognition and sensory impairments, literacy for at-risk students, program design, small sample research, and staff development.

950 Proseminar in Counseling Psychology
Fall. 3(3-0) R: Open only to Ph.D. students in the Counseling Psychology major. Historical development of counseling psychology as a professional discipline. Traditional and contemporary issues in theory, research, practice and training.

951 Technology, Society, and Culture
Fall. 3(3-0) R: Open only to doctoral students. Interactions among technology, society, and culture, with special attention to education. Technology adoption as a social phenomenon. Effects of technology on communication, social interaction, and sharing of knowledge. Effects of systems and practices on technology.

952 Technology for Teaching and Learning in Higher Education
Spring. 3(3-0) R: Open only to doctoral students. Technology for support of teaching and learning in higher educational settings. Theories, research, and design of on-line learning. Electronic portfolios. Libraries in the age of the Internet.

953 Teachers and Technology
Fall of even years. 3(3-0) R: Open only to doctoral students in the College of Education. Impact of new technologies on teacher knowledge and practices of teaching. Teachers' use of technology, teacher knowledge, teacher education, and changing roles of teachers.

955 Research Design and Methods for Learning, Technology, and Culture
Fall. 3(3-0) P.M: (CEP 930) and (CEP 932 or TE 931) R: Open only to doctoral students in the College of Education. Research design and methods for studying learning, development, technology, and culture in educational contexts: classrooms, computer-mediated environments, homes, communities, and workplaces.

956 Mind, Media, and Learning
Spring of even years. 3(3-0) R: Open only to doctoral students. Philosophy, psychology, and sociology of new media. Media effects and learning with media. Issues of gender, identity, culture in technologically mediated environments, including Internet, virtual reality, computer games, simulations, artificial intelligence (AI) systems, and pedagogical agents.

957 Learning in Complex Domains
Fall. 3(3-0) R: Open only to doctoral students. Problems of learning in complex and ill-structured domains. Real-world knowledge application. Learning difficult subject matter. Situated, collaborative, and case-based approaches to learning in complex domains. Technologies for enabling new kinds of learning.

960 Theoretical Foundations of Counseling Psychology
Fall. 3(3-0) R: Open only to Ed.S. or Ph.D. students in the Counseling Psychology or Rehabilitation Counselor Education or School Psychology or Counselor Education major. Theoretical models of counseling, personality, and behavior change. Research literature on the process and outcomes of counseling. Selected professional issues.

961 Perspectives on Diversity in Counseling Psychology
Spring. 4(3-4) R: Open only to Ed.S. or Ph.D. students in the Counseling Psychology or Counselor Education or Rehabilitation Counselor Education or School Psychology major. Cultural, gender, and disability dynamics as they affect human functioning and counseling practices. Strategies and techniques for multicultural perspectives in counseling.

962 Psychology of Career Development
Spring. 3(3-0) RB: (CEP 864) R: Open only to Ph.D. students in the Counseling Psychology or Counselor Education or Rehabilitation Counselor Education major. Theories of career choice and development. Psychological processes underlying vocational behavior.

963 Ethics in Counseling Psychology
Spring. 3(3-0) R: Open only to Ed.S. or Ph.D. students in the Counseling Psychology or Counselor Education or Rehabilitation Counselor Education or School Psychology major. Traditional and contemporary issues in theory, research, practice and training with a focus on ethics including ethical theory, principles, standards, codes of conduct, and legal issues.

964 Counseling Foundations
Fall of odd years. 3(3-0) RB: (CEP 960 or concurrently) R: Open only to Ph.D. students in the Counseling Education or Rehabilitation Counselor Education major. Foundations and practice of rehabilitation and school counseling. Pre-service preparation issues. Professional and policy implications.

965 Current Research and Issues in Counseling
Fall of even years. 3(3-0) RB: (CEP 964) R: Open only to Ph.D. students in the Counseling Education or Rehabilitation Counselor Education major. Practice and research issues in rehabilitation counseling and school counseling.
Counseling, Educational Psychology and Special Education—CEP

966 Psychological Diagnosis and Assessment I
Fall. 3(3-0) RB: (CEP 960) R: Open only to Ph.D. students in the Counseling Psychology major.

967 Psychological Diagnosis and Assessment II
Spring. 3(3-0) RB: (CEP 966) R: Open only to Ph.D. students in the Counseling Psychology major. C: CEP 994B concurrently.
Diagnostic categories, mental status examination, differential diagnosis, and objective and projective psychological assessment.

968 Research Methods in Counseling Psychology
Fall. 3(3-0) RB: (CEP 967) R: Open only to Ph.D. students in the Counseling Psychology or Rehabilitation Counseling Education or Counseling Education major. Research topics and designs in counseling psychology, with emphasis on the development of a viable research proposal.

969 Supervision of Counseling Psychologists
Spring. 3(2-3) RB: (CEP 967 and CEP 994B) R: Open only to Ph.D. students in the Counseling Psychology or Rehabilitation Counseling Education or Counseling Education major. C: CEP 963 concurrently.
Theoretical, empirical and practical aspects of the supervisory relationship. Process and outcome variables.

970 Counseling Across Educational Settings
Spring of even years. 3(2-3) RB: (CEP 960 and CEP 961 and CEP 962) R: Open only to doctoral students in the Counseling Psychology or Rehabilitation Counseling Education or School Psychology major. C: CEP 963 concurrently.
Development of counseling programs and delivery of counseling services across multiple educational settings: elementary and secondary schools, alternative educational sites, community colleges, and universities.

971 Teaching Practicum in Counselor Education
Fall of even years. 3(3-2) P:M: (CEP 970) R: Open only to doctoral students in the Counseling Psychology or Rehabilitation Counseling Education or School Psychology Education or School Psychology major. C: CEP 963 concurrently.
Development of personalized teaching portfolios. Preparation of training modules that address critical issues in counseling and teaching evaluation.

975 Psychological Assessment of Cognitive Dysfunction
Spring of even years. 3(3-0) RB: (CEP 966 or CEP 880) R: Open only to doctoral or Educational Specialist students in the Department of Counseling, Educational Psychology and Special Education.

982 Seminar in Counseling, Educational Psychology and Special Education
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to Ph.D. students in the College of Education.
Seminars in the various fields of emphasis in counseling, educational psychology, and special education.

990 Independent Study
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to Ph.D. students. Individual or small group study, guided by a faculty member, in the areas of Counseling, Educational Psychology and Special Education.

991A Special Topics in Learning, Technology and Culture
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to doctoral students in the College of Education. Special topics in learning, technology, and culture in education.

991B Special Topics in Educational Statistics and Research Design
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to doctoral students in the College of Education. Special topics in educational statistics and research design.

994A Counseling Psychology Practicum I
Fall. 3(0-9) RB: (CEP 960) R: Open only to Ph.D. students in the Counseling Psychology major. Supervised practice in counseling, assessment, diagnosis and related professional activities within an agency providing counseling and psychological services.

994B Counseling Psychology Practicum II
Spring. 3(0-9) P:M: (CEP 994A) R: Open only to Ph.D. students in the Counseling Psychology major. Intermediate supervised practice in counseling, assessment, diagnosis and related professional activities within an agency providing counseling and psychological services.

994C Advanced Practicum in Counseling Psychology
Spring. 3(0-9) P:M: (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 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: (CEP 933) R: Open only to doctoral students in the 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 54 credits in all enrollments for this course. R: Open only to doctoral students in the Department of Counseling, Educational Psychology and Special Education. Doctoral dissertation research.

CRIMINAL JUSTICE

School of Criminal Justice
College of Social Science

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

210 Introduction to Forensic Science
Fall. 3(3-2)

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

292 Methods of Criminal Justice Research
Fall, Spring. 4(4-0) R: (CJ 220) R: Not open to freshmen. Open only to students in the School of Criminal Justice. Logic, design, analysis and ethical principles in criminal justice research. Indicators of crime and its control.

294 Criminal Justice Professionals
Fall. 2(1-2) P:M: (CJ 110 and CJ 220) RB: and one additional CJ course. R: Open only to sophomores or juniors or seniors in the School of Criminal Justice. Operation of criminal justice organizations and agencies. Development and structure of criminal justice professions. Career planning and development. Employment practices. Ethics.

335 Police Process
Fall, Spring. 4(4-0) R: (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. 4(4-0) P:M: (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.