

**Descriptions —Computer Science
of
Courses**

841. Artificial Intelligence
Fall. 3(3-0)
P: CPS 440. R: Open only to Computer Science or Electrical Engineering majors.
Types of intelligence, knowledge representation, cognitive models. Goal-based systems, heuristic search and games, expert systems. Language understanding, robotics and computer vision, theorem proving and deductive systems, and learning.

845. Knowledge-Based Systems (MTC)
Spring. 2 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course.
P: CPS 841. R: Open only to Computer Science or Electrical Engineering majors.
Research literature examining model-based reasoning, design, or diagnosis. Effectiveness and potential for future developments.

846. Laboratory in Knowledge-Based Systems (MTC)
Summer. 2(1-1) A student may earn a maximum of 6 credits in all enrollments for this course.
P: CPS 845. R: Open only to Computer Science or Electrical Engineering majors.
Development of a working model-based reasoning, design, diagnostic system. Design, implementation, and testing.

860. Foundations of Computing
Fall. 3(3-0)
P: CPS 360. R: Open only to Computer Science or Electrical Engineering majors.
Models of computation: partial recursive functions, Turing machines, alternative models of computing. Basic theory and limitations of computability. Undecidability. Resource-bounded computational complexity, non-determinism, NP-completeness.

362. Computational Complexity
Spring of even-numbered years. 3(3-0)
P: CPS 860. R: Open only to Computer Science or Electrical Engineering majors.
Theory of computational complexity. Uniform, nonuniform and probabilistic complexity classes. The polynomial time hierarchy. Structure of complexity classes.

880. Advanced Database Systems
Fall. 3(3-0)
P: CPS 480. R: Open only to Computer Science or Electrical Engineering majors.
Distributed and object-oriented databases and knowledgebase systems. Design theory, query optimization, and transaction processing.

885. Artificial Neural Networks
Fall. 3(3-0) Interdepartmental with Electrical Engineering. Administered by Electrical Engineering.
Overview of neuro-engineering technology. Basic neural network architectures. Feedforward and feedback networks. Temporal modeling. Supervised and unsupervised learning. Implementation. Basic applications to pattern recognition.

90. Independent Study
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.
P: Open only to Computer Science or Electrical Engineering majors. Approval of department.
Independent study of some topic, system, or language not covered in a regular course.

91. Selected Topics
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course.
P: Open only to Computer Science or Electrical Engineering majors.
Selected topics in computer science of current interest and importance but not covered in a regular course.

898. 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.
Master's degree Plan B individual student project: original research, research replication, or survey and reporting on a topic such as system design and development, or system conversion or installation.

899. 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.

902. 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.
P: CPS 802, CPS 803. R: Open only to Computer Science or Electrical Engineering majors.
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.

910. Selected Topics in Computer Networks and Distributed Systems
Spring of even-numbered years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
P: CPS 422, CPS 812. R: Open only to Computer Science or Electrical Engineering majors.
Advanced topics and developments in high-bandwidth computer networks, protocol engineering, and distributed computer systems.

914. Selected Topics in Formal Methods in Software Development
Fall of even-numbered years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
P: CPS 814. R: Open only to Computer Science majors.
Approaches for the incorporation of formal methods in software development. Current projects using formal methods in software engineering. Object-oriented analysis and development techniques.

920. Selected Topics in High Performance Computer Systems
Spring of odd-numbered years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. Interdepartmental with Electrical Engineering.
P: CPS 822. R: Open only to Computer Science or Electrical Engineering majors.
Design of high performance computer systems. Seminar format.

921. Advanced Topics in Digital Circuits and Systems (MTC)
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Electrical Engineering. Administered by Electrical Engineering.
Topics vary each semester. Topics such as testable and fault-tolerant digital systems, embedded architectures.

941. Selected Topics in Artificial Intelligence
Fall. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
P: CPS 841. R: Open only to Computer Science or Electrical Engineering majors.
Topic such as second generation expert systems, human factors, natural language processing, speech understanding, neural networks, genetic algorithms and opportunistic planning.

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

980. Selected Topics in Database Systems
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
P: CPS 880. R: Open only to Computer Science or Electrical Engineering majors.
Recent developments in areas such as distributed and parallel database systems, object oriented database systems, knowledgebase and expert database systems.

999. 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.

**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.

240. Diverse Learners in Multicultural Perspective
Fall, Spring, Summer. 3(2-2) Interdepartmental with Teacher Education.
R: 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.

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

261. Substance Abuse
Summer. 3(3-0)
Effects of mood-altering chemicals. Treatment approaches and resources. Special emphasis on adolescent users.

301. Introduction to Students With Mild Impairments (W)
Spring. 3(3-0)
R: Open only to students admitted to the teacher certification program in emotional impairment or learning disabilities. Completion of Tier I writing requirement.
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, 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(2-3)
P: 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. Completion of Tier I writing requirement.
Political, social, methodological, historical, philosophical, and legal issues in educating deaf children and youth.
SA: CEP 840
- 441A. American Sign Language I**
Fall, Spring, Summer. 3(3-0)
P: 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: 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, Spring, Summer. 3(3-0)
P: CEP 441B.
Use of space for multiple-person discourse. Formal register. Colloquial and idiomatic language. Applications to teaching in American Sign Language.
- 442B. American Sign Language IV**
Fall, Spring, Summer. 3(3-0)
P: CEP 442A.
Use of space for creative interpretation of literature, science, mathematics, socio-historical concepts. Formal register. Colloquial and idiomatic language.
- 443A. Braille Literacy I**
Fall. 3(1-4)
R: Not open to freshmen and sophomores.
Reading and writing standard English Braille notations. 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.
Reading and writing Grade III Braille. Braille shorthand and slate writing. Music, foreign language, mathematics and scientific notations in combination with abacus usage. Textbook formats.
- 444. Education of Students with Severe and Multiple Disabilities (W)**
Spring. 3(3-0)
P: CEP 260 or TE 150. R: Not open to freshmen and sophomores. Completion of Tier I writing requirement.
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 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.
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(3-0)
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(3-0) 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
- 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; 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, Summer. 3(3-0)
R: Not open to freshmen or sophomores.
Interpersonal communication focusing on dynamics of listening process, interpersonal style, and barriers to communication. Self-study. Interpersonal process recall.
- 502A. Internship in Teaching Diverse Learners II: Learning Disabilities**
Spring. 6(2-24)
P: CEP 801A, CEP 802A, TE 501. C: CEP 803A, CEP 804A concurrently. 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.
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)
P: CEP 801A, CEP 802A, TE 501. C: CEP 803A, CEP 804A concurrently. 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.
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)
P: CEP 801A, CEP 802C, TE 501. C: CEP 803C, CEP 804C concurrently. 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 893D.
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(2-24)
P: CEP 801A, CEP 802D, TE 501. C: CEP 803D, CEP 804D concurrently. 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 854B.
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.

Descriptions—Counseling, Educational Psychology and Special Education of Courses

801A. Professional Role in Teaching Special Education I: Collaboration and Consultation
Fall. 3(2-3)

P: TE 401. C: TE 501; CEP 802A or CEP 802C or CEP 802D concurrently. R: Open only to students admitted to the teacher certification program in special education or to master's students in the Special Education major. 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. C: CEP 801A, TE 501 concurrently. 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 802C or CEP 802D.

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)

C: CEP 801A, TE 501 concurrently. 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.

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)

C: CEP 801A, TE 501 concurrently. 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.

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)

Self-concept development from childhood through adulthood. Development of self-awareness and understanding of one's personal and interpersonal style. Self-esteem enhancement strategies. Implications for teachers and learners.

803A. Professional Role in Teaching Special Education II: Assessment of Mild Impairment
Spring. 3(2-3)

P: CEP 801A, CEP 802A, TE 501. C: CEP 502A or CEP 502B, CEP 804A concurrently. 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 803C or CEP 803D.

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. C: CEP 502C, CEP 804C concurrently. 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.

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. C: CEP 502D, CEP 804D concurrently. 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.

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. C: CEP 502A or CEP 502B, CEP 803A concurrently. 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.

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. C: CEP 502C, CEP 803C concurrently. 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.

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. C: CEP 502D, CEP 803D concurrently. 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.

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.

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 graduate students in Educational Psychology with an Instructional Technology emphasis and in Higher Adult and Lifelong Education.

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 graduate students in the College of Education.

Principles of instructional design and delivery applied to lessons. Explanation, information processing, transfer, demonstration, practice, mental set motivation. Exposition vs. discovery of 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 maintaining 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.
- 817. Alternative Perspectives on Human Abilities**
Spring. 3(3-0) Interdepartmental with Teacher Education.
Various perspectives on the nature of human abilities. Implications for educating diverse students. Social constructivist perspectives on the historical and cultural roots of traditional views of intelligence.
- 819. 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.
- 821. 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.
- 822. Approaches to Educational Research**
Fall, Spring, Summer. 3(3-0)
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.
- 824. Classroom Assessment**
Fall, Spring. 3(3-0) Interdepartmental with Teacher Education.
R: Open only to graduate students in College of Education.
Basic assessment for classroom teachers. Design, development, and use of objective test and other methods of assessing and grading student progress, including portfolios and performance assessments.
- 826. 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.
- 842B. Language Development in Deaf Children: Secondary Level**
Fall. 3(3-0)
P: CEP 442A. R: Open only to graduate students in the Deaf Education Emphasis of Special Education, and in Audiology and Speech Sciences.
Language development in deaf adolescents. Materials and methods for assessment and instruction in American Sign Language and English.
- 847B. Evaluation and Remediation for Mildly Impaired Secondary Students**
Spring. 3(3-0)
P: CEP 803A. C: CEP 894H concurrently. R: Open only to graduate students in the Counseling Psychology and School Psychology or School Psychology, or Special Education major.
Strategies for evaluation and remediation of reading and written language disorders. Selection, development, evaluation, and modification of reading and writing programs.
- 848B. Problems in Learning Secondary Mathematics**
Fall. 3(3-0)
P: CEP 803A. C: CEP 894H concurrently. R: Open only to graduate students in the Special Education major.
Techniques and instruments for identifying and remediating learning problems in mathematical areas at the secondary level.
- 854B. Clinical Teaching: Blind Children in Elementary Education**
Spring. 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course.
P: CEP 443B, CEP 854A. R: Open only to graduate students in the College of Education.
Supervised student teaching in elementary education programs for blind and visually impaired children.
- 855B. Clinical Teaching: Blind Youth in Secondary Education**
Spring. 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course.
P: CEP 443B, CEP 855A. R: Open only to graduate students in the College of Education.
Supervised student teaching in secondary education programs for blind and visually impaired youth.
- 856B. Clinical Teaching: Deaf-Blind Children and Youth**
Spring. 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course.
P: CEP 456A. R: Open only to master's students in the Special Education major.
Supervised student teaching in elementary and secondary education programs for deaf-blind students.
- 856C. Clinical Teaching: Deaf-Blind Youth in Secondary Education**
Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
R: Open only to master's students in the Special Education major.
Supervised teaching experience in secondary education programs for deaf-blind students.
- 857B. Techniques of Orientation and Mobility I**
Fall. 3(1-4)
C: CEP 857A concurrently. R: Open only to graduate students in Special Education with an emphasis in deaf education or blind education or approval of department.
Methods of orientation and navigation related to blindness. Structure, function, and problems with the proprioceptive system in relation to orientation and mobility.
- 857C. Techniques of Orientation and Mobility II**
Spring. 3(1-4)
C: CEP 857B concurrently. R: Open only to graduate students in Special Education with an emphasis in deaf education or blind education or approval of department.
Advanced techniques and methods for negotiating the range of outdoor environments from rural and residential to complex business areas. Simulated under blind-fold and low vision conditions.
- 858. Special Education Law**
Fall of even-numbered 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.
- 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.

Descriptions — Counseling, Educational Psychology and Special Education of Courses

- 862. 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.
- 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 workplace 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 893A 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 820. R: Open only to Educational Specialist and Ph.D. students in School Psychology and Counseling Psychology.
Measurement of intelligence. Observation, practice, supervision, interpretation, and report writing in an educational setting.
- 881. Personality Assessment**
Spring, 3(3-0)
P: CEP 821, CEP 885, PSY 475. R: Open only to students in the Counseling Psychology and School Psychology major or the School Psychology major or approval of department.
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-numbered years, 3(3-0)
P: CEP 801, CEP 821, CEP 880. R: Open only to graduate students in School Psychology.
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. R: 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.
- 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.
- 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: CEP 894B. R: Open only to students in the School Psychology major.
Supervised experience in the practice of school psychology. Diagnostics, consultation and intervention.
- 893C. Counseling Internship**
Fall, Spring, 3 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course.
P: CEP 865. R: Open only to masters students in Counseling.
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.
- 893D. Teaching Internship in Elementary Deaf Education**
Spring, 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course.
P: CEP 442B. R: Open only to graduate students in the Special Education major.
Supervised teaching of deaf students in a public school or school for deaf children.
- 893E. Teaching Internship in Secondary Deaf Education**
Spring, 1 to 15 credits. A student may earn a maximum of 15 credits in all enrollments for this course.
P: CEP 442B, CEP 842B. R: Open only to graduate students in the Special Education major.
Supervised teaching of deaf students in a public school or school for deaf children.
- 893F. Special Education Internship in Elementary Teaching**
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 mildly impaired/elementary emphasis in Special Education.
Supervised teaching of mildly impaired, learning disabled students in elementary schools or clinical settings.
- 893G. Special Education Internship in Secondary Teaching**
Fall, Spring, 4 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course.
P: CEP 803A, CEP 847B or CEP 848B concurrently. R: Open only to graduate students in the mildly impaired/secondary emphasis in Special Education.
Supervised teaching of mildly impaired, learning disabled students in secondary schools or clinical settings.
- 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 880, CEP 885. C: CEP 884 concurrently. R: Open only to graduate students in the School Psychology major.
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 800, CEP 801. R: Open only to graduate students in the Educational Psychology major.
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. Practicum in Orientation and Mobility
Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
P: CEP 857C. R: Open only to graduate students in Education.
Supervised practice in teaching independent travel to visually impaired and blind students in elementary and secondary education.

894F. Practicum in Orientation and Mobility: Secondary Education
Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
P: CEP 857C. R: Open only to graduate students in Special Education with an emphasis in blindness.
Supervised teaching of independent travel to visually impaired and blind students in secondary education.

894G. Teaching Practicum: Mildly Impaired Children in Elementary Education
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
P: CEP 803A. C: CEP 804A concurrently. R: Open only to graduate students in the Special Education major.
Field experience with students who have mild impairments. Planning, implementing, and critiquing instruction in school settings.

894H. Teaching Practicum: Mildly Impaired Youth in Secondary Education
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
P: CEP 803A. C: CEP 847B concurrently. R: Open only to graduate students in the Special Education major.
Field experience with students who have mild impairments. Planning, implementing, and critiquing instruction in school settings.

894I. Teaching Practicum: Deaf Children in Elementary Education
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
P: CEP 840 or concurrently. R: Open only to graduate students in Special Education.
Field experience with deaf and hard-of-hearing students. Planning, implementing, and critiquing instruction in school settings.

894J. Teaching Practicum: Deaf Youth in Secondary Education
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
P: CEP 840 or concurrently. R: Open only to graduate students in Special Education.
Field experience with deaf and hard-of-hearing students. Planning, implementing, and critiquing instruction in school settings.

895. Research Ethics
Summer. 1 credit. Interdepartmental with Physical Education and Exercise Science, Teacher Education, and Educational Administration. Administered by Physical Education and Exercise Science.
R: Open only to graduate students in the Department of Counseling, Educational Psychology and Special Education or Department of Educational Administration or Department of Physical Education and Exercise Science 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.

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 900. 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 801. 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 801 or CEP 803. 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-numbered years. 3(3-0)
P: CEP 800, 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-numbered 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-numbered 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-numbered years. 3(3-0)
P: CEP 809. R: Open only to graduate students in Educational Psychology.
Characteristics of instructional-design theories. Empirical inquiry, specific subject matters, and meta-theories.

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-numbered 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-numbered 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-numbered 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-numbered 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.

**Descriptions —Counseling, Educational Psychology and Special Education
of
Courses**

- 915. Language, Literacy and Learning**
Spring of even-numbered years. 3(3-0) Interdepartmental with Teacher Education.
R: Open only to Ph.D. students in 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-numbered 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-numbered 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-numbered years. 3(3-0)
P: CEP 885. R: Open only to Ph.D. students in School Psychology, Counseling, Educational Psychology, Special Education, and Social Work.
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-numbered years. 3(3-0)
P: CEP 401, CEP 904. R: Open only to Ph.D. students in School Psychology, Counseling Psychology, and Special Education.
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**
Spring. 3(3-0)
P: CEP 821 or CEP 920; CEP 930.
Classical test theory. Generalizability theory. Item response theory. Reliability and validity of criterion referenced tests. Differential item functioning.
- 922. Psychometric Theory II**
Fall of odd-numbered 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-numbered years. 3(3-0)
P: CEP 921, CEP 933.
Item response theory applied to test construction, scaling, and equating tests and their items.
- 924. Educational Data and the Law**
Fall of even-numbered 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.
- 930. Educational Inquiry**
Fall, Spring. 4(4-0) Interdepartmental with Teacher Education.
R: Not open to students with credit in CEP 822.
Alternative approaches to educational research: quantitative, interpretive, and customized. Theoretical assumptions, sources of questions, data collection and analysis, and rhetoric.
- 931. 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.
- 933. 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.
- 934. 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.
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-numbered years. 4(4-0)
P: 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-numbered years. 4(4-0)
P: 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-numbered years. 4(3-3)
P: 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.
- 939. Seminar in Educational Measurement**
Fall of even-numbered years. 3(3-0)
P: CEP 921. R: Open only to doctoral students in College of Education.
Current issues in educational measurement. Topics include ethics and standards in testing, school effectiveness indices, and parameters of teacher testing.
- 940. Policy Analysis of Trends in Special Education**
Spring of odd-numbered 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-numbered 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-numbered 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-numbered 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.
- 944. Research Seminar in Special Education**
Fall. 3(3-0)
P: CEP 933. R: Open only to Ph.D. students in Special Education.
Application of research methods in special education. Topics include data collection, analysis, interpretation, and dissemination.
- 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 doctoral students in the Rehabilitation Counseling and School Counseling major.
Theory and supervised practice in educating, and supervising prospective counselors. Approaches, models, and strategies.
- 949. Critical Issues in Special Education**
Fall of even-numbered years. 3(3-0)
P: CEP 901. R: Open only to doctoral students in the Special Education major.
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 doctoral students in counseling psychology and school psychology.
Historical development of counseling psychology as a professional discipline. Traditional and contemporary issues in theory, research, practice and training.

960. Theoretical Foundations of Counseling Psychology
Fall. 3(3-0)

R: Open only to Ph.D. students in Counseling Psychology and School Psychology.
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 doctoral students in Counseling Psychology and School Psychology, Psychology, and Family and Child Ecology.
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
Fall. 3(3-0)

P: CEP 864. R: Open only to Ph.D. students.
Theories of career choice and development. Psychological processes underlying vocational behavior.

963. Ethics in Counseling Psychology
Spring. 3(3-0)

R: Open only to doctoral students in Counseling Psychology and School Psychology, Rehabilitation Counseling and School Counseling, and Family and Child Ecology.
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-numbered years. 3(3-0)

P: CEP 960 or concurrently. R: Open only to doctoral students in College of Education.
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-numbered years. 3(3-0)

P: CEP 964. R: Open only to doctoral students in the Rehabilitation Counseling and School Counseling major.
Practice and research issues in rehabilitation counseling and school counseling.

966. Psychological Diagnosis and Assessment I
Fall. 3(3-0)

P: CEP 960. C: CEP 994A concurrently. R: Open only to doctoral students in Counseling Psychology.
Principles of psychological testing and measurement. Principles of clinical interviewing. Cognitive and intellectual assessment. Career development and choice assessment.

967. Psychological Diagnosis and Assessment II
Spring. 3(3-0)

P: CEP 966. C: CEP 994B concurrently. R: Open only to Ph.D. students in Counseling Psychology.
Diagnostic categories, mental status examination, differential diagnosis, and objective and projective psychological assessment.

968. Research Methods in Counseling Psychology
Fall. 3(3-0)

P: CEP 933. R: Open only to Ph.D. students in Counseling Psychology.
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)

P: CEP 967, CEP 994B. R: Open only to Ph.D. students in Counseling Psychology and School Psychology.
Theoretical, empirical and practical aspects of the supervisory relationship. Process and outcome variables.

982. 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.

R: Open only to doctoral students in 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 Educational Psychology
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.

991B. Special Topics in Educational Statistics and Research Design
Fall, Spring. 4(4-0) A student may earn a maximum of 16 credits in all enrollments for this course.

P: CEP 933. R: Open only to Ph.D. students.

994A. Counseling Psychology Practicum I
Fall. 3 credits.

P: CEP 960. C: CEP 966 concurrently. R: Open only to Ph.D. students in Counseling Psychology.
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 credits.

P: CEP 994A. C: CEP 967 concurrently. R: Open only to Ph.D. students in Counseling Psychology.
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 credits.

P: CEP 994B. R: Open only to Ph.D. students in Counseling Psychology.
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 933. 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)

Techniques of crime scene search. Collection and preservation of physical evidence. Class and individual scientific tests. Rules of evidence governing admissibility of physical evidence. Expert testimony.

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 Forensic Science or Sociology major or approval of school.

Introduction to the socio-legal foundation of crime. Crime typology and measurement procedures. Theory and public policy. Societal responses to crime and criminals.

292. Methods of Criminal Justice Research
Fall, Spring, Summer. 4(4-0)

P: 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.

335. Police Process

Fall, Spring. 4(4-0)

P: CJ 292. R: Open only to juniors or seniors in the Criminal Justice or Forensic Science 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 292. R: Open only to juniors or seniors in the Criminal Justice or Forensic Science 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 or Forensic Science 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. R: Open only to juniors or seniors in Criminal Justice or Forensic Science.

Administration of criminal law. Investigation, prosecution, adjudication, and sentencing. Constitutional safeguards and legal controls on official action.