541. Artificial Intelligence I
Fall, Winter, 4(4-0) CPS 471, STT 441.
Knowledge representations, heuristics, theory of problem solving, expert systems, adaptive systems, natural language understanding, automatic theorem proving, vision systems.

542. Artificial Intelligence II
Spring, 3(3-0) CPS 841.
Representation of implicit knowledge, learning systems, description of intelligent systems, case studies, term project.

576. Performance Measurement Techniques
Fall, 3(3-0) CPS 328, CPS 413, STT 441.
Performance evaluations on computer systems, evaluation of the central processor. Systems analysis, simulation, programmed measurement, and instrumental measurement techniques. Case studies.

581. Operating Systems Theory I
Winter, 3(3-0) CPS 313, STT 441.
Control of concurrent processes. Deterministic and probabilistic models of processor scheduling. Introduction to auxiliary and buffer storage models.

582. Operating Systems Theory II
Spring, 3(3-0) CPS 881.
Auxiliary and buffer storage models. Storage allocation in paging systems. Multiprogrammed memory management.

584. Large Data Base Theory
Summer, 3(3-0) CPS 413, CPS 400 or CPS 452 or approval of department.

590. Special Topics
Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 10 credits. Approval of department.
Special topics in computer science of current interest and importance.

599. Master's Thesis Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

921. Multiprocessors and Parallel Processing
Fall, 3(3-0) CPS 812, CPS 815. Interdepartmental with the Department of Electrical Engineering.
Massively parallel processor, parallel memory, interconnection network, tightly and loosely coupled multiprocessors, message-passing model, shared-memory model, operating systems, performance, parallel languages and algorithms.

922. Advanced Computer Systems
Winter, 3(3-0) CPS 921, E E 813. Interdepartmental with the Department of Electrical Engineering. VLSI and WSI architectures, mapping algorithms to architectures, functional programming, database computer, concurrent symbolic processing and logical programming, computer architecture for artificial intelligence, recent advances in computer systems.

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
460. Education of Exceptional Children
   Fall, Spring, Summer. 3(3-0) Approval of department.
   Characteristics and educational needs of students with handicapping conditions and exceptionalities. Special education programs and supportive community services.

460B. Education Provisions for the Physically Impaired
   Fall, Spring. 3(3-0) CEP 460.
   Facilities, programs, trends, methods, materials and terminology in education of the physically impaired.

460C. Psychoeducational Characteristics of the Mildly Impaired
   Winter. 3(3-0) CEP 460; CEP 428B, CEP 428C, CEP 467K concurrently or CEP 465E, CEP 466C, CEP 466K concurrently or approval of instructor.
   Cognitive, affective, and social characteristics of the mildly impaired. Instructional practices that affect school learning and personal adjustment.

460D. Classroom and Behavior Management in Special Education
   Spring. 3(3-0) CEP 460.
   Behavior management procedures for handicapped students in school settings. Specific methods for assessment, teaching, maintenance, and generalization of academic and non-academic behaviors.

460E. Academic Assessment of Mildly Impaired
   Fall. 3(3-0) CEP 460, T E 310, T E 312, T E 313. Taken concurrently with CEP 460L, CEP 460K, CEP 460L, CEP 460L.
   Screening and placement procedures; terminology and interpretation of tests used for assessment of intelligence, aptitude, achievement, personality, and interests of the mildly impaired.

460F. Academic Instruction of Mildly Impaired
   Fall. 3(3-0) CEP 460, T E 310, T E 312, T E 313. Taken concurrently with CEP 460L, CEP 460K, CEP 460L, CEP 460L.
   Education practices and remedial strategies for teaching academic skills to mildly impaired students.

460G. Practicum: Special Education CORE
   Fall. 4(0-6) CEP 460, T E 310, T E 312, T E 313. Taken concurrently with CEP 460L, CEP 460K, CEP 460L, CEP 460L.
   Supervised practicum in an educational program for mildly impaired learners.

460H. Core Seminar in Special Education
   Fall. 2(8-0) CEP 460, T E 310, T E 312, T E 313. Taken concurrently with CEP 460L, CEP 460K, CEP 460L.
   Consideration of affective interactions with children, parents, other professionals, and self. Attention to sharing field experiences, examining belief behavior consistency, teaching in the affective domain, and the parent-teacher partnership.

463A. The Exceptional Child in the Regular Classroom
   Spring. 2(2-0) T E 201B.
   Exceptional learners characteristics, and instructional strategies/curricular adaptations appropriate for such learners. Legislation mandating educational programs and affecting school practices will be reviewed.
Descriptions — Counseling, Educational Psychology and Special Education

of Courses

472A. Braille (CEP 470C.) Winter. 4(2-4) CEP 460 or concurrently. Reading and writing standard English Braille including music, foreign language and scientific notations. Use of braille, slate and stylus.

472B. Methods for Blind Students in Elementary Education Spring. 4(3-3) CEP 472A; 1 credit of CEP 470K concurrently. Unique curricula, methods and media for teaching sensory/concept development, communication and other skills to visually impaired learners, to enable them to access the basic curriculum of elementary education.

472C. Mathematics Methods for Blind Students in Elementary Education (CEP 470F.) Fall. 3(3-2) CEP 472A. Basic skills in teaching mathematics readiness and computations concepts to visually impaired learners in elementary school. Use of Nemeth Braille Code for mathematics and science, and adapted abacaus.

472D. Secondary Education of Visually Impaired Youth Fall. 4(3-3) CEP 460 or concurrently; 1 credit of CEP 470K concurrently. Teaching the enabling skills needed by visually impaired youth to access the regular secondary education curriculum, meet graduation standards, and achieve a successful transition from school to work.

472E. Provisions for the Visually Impaired in Elementary Education (CEP 470A.) Spring. 3(3-3) CEP 460 or concurrently; CEP 434 or concurrently; 1 credit of CEP 470K concurrently. History, legislation, statistics, trends in elementary education of visually impaired. Methods and materials for assessment and utilization of visual potential.

472F. Orientation and Mobility Fall. Winter. 3(1-4) CEP 470G or concurrently; majors in special education with an emphasis in visually impaired.

472G. Teaching Orientation and Mobility to Elementary Education Visually Impaired Spring. Summer. 1 to 15 credits. May reenroll for a maximum of 18 credits. CEP 472G; CEP 472H; approval of department. Practicum in teaching independent travel to visually impaired and blind students in elementary education.

473A. Teaching Orientation and Mobility to Elementary Education Visually Impaired Spring. Summer. 1 to 15 credits. May reenroll for a maximum of 18 credits. CEP 473A; approval of department. Practicum in teaching independent travel to visually impaired and blind students in elementary education.

473K. Teaching Orientation and Mobility to Secondary Education Visually Impaired Spring, Summer. 1 to 15 credits. May reenroll for a maximum of 18 credits. CEP 473K; CEP 473L or concurrently; approval of department. Practicum in teaching independent travel to visually impaired and blind students in secondary education.

482. Seminars in Counseling, Educational Psychology and Special Education (MTC) Fall, Winter, Spring. 1 to 6 credits. May reenroll for a maximum of 8 credits if different topics are taken. Approval of department.

480. Principles of Educational Measurement Winter, Summer. 3(3-0) CEP 401 or CEP 400; CEP 404. Nature of measurement and types of scales. Units, scores, norms, sampling, item analysis, batteries and profiles. Principles of reliability and validity. Use of test scores in decision making.

801. Seminar in Test Development Spring of odd-numbered years. 3(3-0) CEP 400. Techniques in preparing and developing achievement test items and tests.

802A. Appraisal of Individual Intelligence and Personality: Individual Measurement—Binet Winter. 3(3-0) CEP 401 or CEP 400 or PSY 415; approval of instructor. Fundamentals of individual intelligence measurement. Measurement of intelligence with the Stanford-Binet. Observation, practice, and interpretation in an educational setting.

802B. Appraisal of Individual Intelligence and Personality: Individual Measurement—Wechsler Fall. Winter. 3(3-0) CEP 401 or CEP 400 or PSY 415; approval of instructor. Measurement of intelligence with the Wechsler scales. Observation, practice, supervision, and interpretation.

802C. Appraisal of Individual Intelligence and Personality: Personality Assessment in Education Spring. 3(3-0) CEP 400 or CEP 401, CEP 813 or PST 427A. Study of general personality structure and methods in personality assessment related to education.

803. Educational Research Methods Fall, Winter, Spring, Summer. 3(3-0) Rationale for and methods of research in education. Emphasis is given to the identification of researchable problems and the interpretation of research studies in the student's major field.

804. Appraising Educational Research Winter, Summer. 4(4-0) Approval of instructor. Appraisal of educational research from a data analytical point of view. Issues of statistical models and experimental design needed to critically examine research.

805. Educational Program Evaluation Fall, Spring. 3(3-0) CEP 805. History and current status of program evaluation, including a review of various evaluation models, common problems of implementation and alternative evaluation design.

809. Case Studies in Program Evaluation Winter. 3(3-0) CEP 808. Interdepartmental with the Department of Teacher Education.

811. Psychology of Classroom Learning Fall, Spring, Summer. 3(3-0) CEP 410 or CEP 411 or concurrently. Survey of research with special attention to applications to teaching and development of school programs.

812A. Growth and Behavior Fall. Spring, 3(3-0) CEP 412 or approval of instructor. Survey of research with special attention to applications to teaching and school programs.

812B. Psychology of Adolescence in the Schools Winter, Spring. 3(3-0) Adolescent growth and development with emphasis on physical maturation, intellectual growth, and self-concept development. Impact of family and peer relations, social-emotional adjustment, problems teachers face with adolescents.

812C. Psychology of the Gifted Student Winter. 3(3-0) CEP 812A or CEP 812B. This course will focus on the psychosocial characteristics of gifted and talented students, the efficacy of administrative provisions, the development of creativity, and special talents.

813. Social and Emotional Behavior in the Classroom Fall, Spring. 3(3-0) Six credits in Psychology or Educational Psychology. Survey of experimental and clinical research related to life factors which affect social-emotional development; implications for teaching.

814. Psychology of Classroom Discipline Summer. 3(3-0) Experience in teaching or pupil personnel work. The study and practice of positive strategies for the resolution of classroom discipline problems.

815A. Behavior Disorders in Children Winter. 3(3-0) 12 graduate credits in educational psychology or a related area. Characteristics, causes and treatment of school related behavior disorders in children considered within a developmental framework.
818B. Roles and Functions of School Psychologists
Spring, 3(3-0) Admission to Ed.S. program or approval of instructor.
History and current status of the field. Current concerns in assessment, reporting of findings, consultation and legal-ethical responsibilities.

819C. Psychological Foundations of Reading Instruction
Fall, Spring, Summer. Approval of instructor.
Instruction in reading as informed by current research in cognitive psychology, with emphasis on the relationship between cognitive processes and reading comprehension.

820C. Clinical Practice in Remedial Reading
Fall, Winter, Spring, Summer. Admission to CEP 820A or approval of instructor. Supervised experience in a public school setting involving individual psychological instruments, preparation of written reports, participation in educational planning and placement conferences, and consultation regarding handicap and normal children and youth.

820D. School Psychological Consultation
Spring. CEP 819B, CEP 818B.
Description and evaluation of the major approaches to psychological consultation as practiced by school psychologists.

820E. Diagnosis of Reading Difficulties
Fall, Winter, Spring, Summer. Admission to CEP 820A or approval of instructor. CEP 820E recommended.
Causes and types of reading retardation are considered, and procedures for working with retarded readers are examined. Laboratory experiences in administering and interpreting standardized and informal tests are provided.

820F. Process of Instructional Development
Fall, Winter, Spring, Summer. Admission to CEP 820A or approval of instructor. CEP 820E recommended.
Application of a validated instructional systems approach to the development of practical solutions to critical teaching and learning problems for teachers, administrators, and media specialists.

834A. Computer Applications in Education I
Fall. CEP 433, CEP 434, or approval of instructor.
Fundamentals of computer applications in education, with hands on experience. History of computer education, computer functioning related to educational problems. Hardware and software available for educational application.

834B. LOGO for Teachers
Spring. CEP 434.
Lesson planning and guided discovery teaching techniques in LOGO.

834C. Teaching Problem Solving Skills with Microcomputers
Winter. CEP 434.
Using computers to develop selected problem solving skills through appropriate data bases, spreadsheets, and programming strategies.

835A. Instructional Design and Technology I
Fall. CEP 838A, CEP 838B, approval of instructor.
Determining a need for, and designing, developing, evaluating, and maintaining instructional products in a variety of settings including schools, universities, business, industry and government.

835B. Instructional Design and Technology II
Winter. CEP 838A, CEP 838B, approval of instructor.
Basic skills and principles of instructional unit design: objectives, task description and analysis, and evaluation of instruction.

835C. Instructional Delivery Lab
Spring. CEP 838A, CEP 838B.
Practice and analysis of presenting explanations and leading discussions based on instructional design principles and procedures grounded in research and theory.

840A. Counseling Practice
Fall, Summer. Admission to M.A. Counseling Program. Interdepartmental with the School of Health Education, Counseling Psychology and Human Performance.
The practice of counseling and guidance in schools, community colleges, and rehabilitation agencies.
840B. Introduction to Counseling Theory
Fall, Summer. 3(3-0) Admission to M.A. Counseling Program.
Selected theories of counseling with special attention to the application of theories of learning in the counseling process.

840C. The Guidance Information Service
Winter. 3(3-0) CEP 840A, CEP 840B.
Interdepartmental with the School of Health Education, Counseling Psychology and Human Performance.
The use of occupational, educational and social information in counseling interviews and in guidance programs.

840D. The Counseling Process
Fall, Winter. 3(3-0) CEP 840A, CEP 840B.
The counseling process with emphasis given to training students in a systematic approach to counseling. Students practice interviewing skills in a counseling laboratory.

840E. Counseling and Consulting Strategies
Fall, Winter. 3(3-0) CEP 840A, CEP 840B.
Selected remedial and preventative counseling strategies will be studied. Methods and techniques for assisting with individual and environmental change will be examined. Procedures for counseling with parents, teachers, and agency personnel will be studied.

840F. Counseling Practicum I
Fall, Winter, Spring. 6(4-8) CEP 840C, CEP 840D.
Interdepartmental with the School of Health Education, Counseling Psychology and Human Performance.
Supervised counseling experienced in selected schools and agencies followed by analysis and critique of these experiences through group and individual consultation with instructor.

840G. Counseling Practicum II
Fall, Winter, Spring. 6(4-8) CEP 840F.
Continuation of CEP 840F.

840J. Group Procedures in Counseling
Winter. 3(3-0) CEP 840D, CEP 840E.
Theories of group counseling with special attention to goal-directed groups. Analysis of group counseling and practice in leading groups under simulated conditions.

840K. Research in Counseling
Fall. 3(3-0) CEP 904.
Emphasis on research methods useful to counselors, measuring counseling outcomes, developing local test norms and expectancy tables, evaluating guidance services, studying behavior change in the single case.
Approved through Fall 1989.

840M. Development and Administration of Counseling Services
Summer. Students in rehabilitation counseling should enroll Fall Term. 3(3-0) Approval of department.
Policy issues in counseling, service development strategies, administrative issues, management and supervisory practices.

842A. Introduction to Rehabilitation Counseling
(HCP 842A.) Fall. 3(3-0) Rehabilitation Counseling majors or approval of instructor.
Overview of field of rehabilitation. Orientation to the Michigan Division of Vocational Rehabilitation. Rehabilitation counseling pre-practicum experience with Michigan Department of Vocational Rehabilitation.

842B. Overview of Rehabilitation Placement
(HCP 842B.) Spring, 3(3-0) CEP 840C, CEP 842A.
An overview of the impact areas of job placement for the handicapped. Presentations on placement models, state agency approaches, pertinent legislation, and employer, counselor, and client perspectives.

842D. Disability Management Services
(HCP 842D.) Fall. 3(3-0) CEP 842B or approval of instructor.
Techniques for surveying employers, gaining entry for an interview, presenting oneself, client, and agency, and assisting clients in their search for employment.

842E. Research Applications in Rehabilitation
(HCP 842E.) Winter. 3(3-0) CEP 842D or approval of instructor.
Research for the handicapped. Presentations on evaluative techniques; identification of alternatives.

842F. Multicultural Counseling
(HCP 842F.) Summer. 3(3-0) CEP 842E, approval of department.
Emphasis on developing counseling skills applicable to urban residents and urban agencies.

842P. Medical Information for Human Service Professionals
(HCP 842P.) Fall. 3(3-0) Rehabilitation Counseling majors or approval of instructor.
Provides a basic understanding of the major body systems and the chronic diseases and disabilities associated with these systems. Emphasis on medical lectures by physicians.

844A. Introduction to Urban Counseling
Fall. 3(3-0) CEP 840A, CEP 840B concurrently.
Problems—health, sociocultural, economic, educational, legal, vocational—manifested by urban residents and their resolution through counseling. Emphasis on systems and personal change mechanisms.
Approved through Fall 1989.

844B. Systemic Counseling
Fall. 3(3-0) Approval of department.
An evaluation of the theory and philosophy of systemic counseling. Issues pertaining to systemic change will be examined.
Approved through Fall 1989.

844C. Urban Counseling Practicum
Fall, Winter, Spring, Summer. 3 credits. May reenroll for a maximum of 12 credits. CEP 844A or approval of instructor.
A minimum of 12 hours per week of supervised counseling will be performed in an urban agency setting. Emphasis on developing counseling skills applicable to urban residents and urban agencies.
Approved through Fall 1989.

844D. Urban Career Development System Analysis
Winter. 3(3-0) CEP 844A, approval of department.
Critical of existing theories of vocational (career) development and interest inventories for use with urban residents, examination of barriers to urban residents, and development of alternative models.

844E. Urban Counseling in the Elementary School
Summer. 3(3-0) Approval of department.
Seminar of issues and impact of the urban environment on the elementary child's personal and social responsibilities with implications for the role of the counselor.
Approved through Fall 1989.

844F. Multicultural Counseling
Winter. 3(3-0)
Historical perspective, definition, manifestations and consequences of sexism, racism and alienation in promoting social inequality. Emphasis upon creating counseling interventions to address the needs of alienated groups.

844G. Community Evaluative Research
Spring. 3(3-0) CEP 844A, CEP 803, CEP 904 or approval of department.
Application of evaluative research methods to the solution of urban problems; review of current evaluative techniques; identification of problems, design, experiments; review of selected studies.
Approved through Fall 1989.

850B. Stress Management
(HCP 850B.) Fall. 3(3-0) Approval of department.
Principles of stress management and their application to personal and occupational stress situations.
865A. Development of Self-Understanding
Fall, Spring, Summer. 3(3-0)
Development of self-awareness and understanding of how one's personal and interpersonal styles influence and is influenced by human relationships in educational settings.

865B. Self-Concept Development and Enhancement
Winter, Summer. 3(3-0)
Self-concept development from childhood through adulthood; how teachers, parents, and personal life experiences impact self-concept; enhancement strategies.

865A. The Handicapped Student in the Regular Classroom
Summer. 3(3-0) Teacher certification.
Problems and issues involved in educating children in the least restrictive environment (mainstream). Emphasis on legal, attitudinal, and practical factors which influence teachers and students.

865. Education of Hearing Impaired Children and Youth
Fall. 3(3-0) CEP 465E; CEP 465K concurrently.
Political, social, methodological, philosophical, and legal issues in the education of hearing impaired children and youth.

865A. Issues in Education of Deaf
Spring. 3(2-3) Graduate students.
Designed for graduate non-majors seeking to expand information and understanding of severe and profound hearing loss; educational implications, programs. Approval through Fall 1989.

865B. Language Development: Assessment, Curriculum and Methods for Secondary Deaf Students
Winter. 3(3-0) CEP 865G or concurrently; CEP 865K concurrently.
Techniques, curriculum, materials, and assessment of language development in secondary deaf students.

865G. Psycho/Social Aspects of Deafness
Winter. 3(3-0) Special education major or approval of instructor.
Psychological and sociological impact of deafness and implications for education; deaf culture.

865K. Practicum: Elementary or Secondary Deaf
Fall, Winter, Spring, 2 to 15 credits. May enroll for a maximum of 20 credits. Graduate students, prior teaching or clinical experience. Practicum in education programs with hearing impaired students.

865M. Independent Study: Education of Deaf
Spring, 2 to 5 credits. May enroll for a maximum of 10 credits. Graduate students. Supervised study in deaf education conducted according to a written agreement stating the problem or topical area of study, the methodology and the product of the study.

866A. Issues in Education of Emotionally Impaired
Summer. 3(3-0) Special Education majors only, approval of instructor.
This seminar focuses on crucial issues related to programming for emotionally impaired students.

866K. Practicum: Emotionally Impaired
Spring, 3 to 12 credits. May enroll for a maximum of 18 credits. Major student's advisor with an emphasis in emotionally impaired, approval of department. Supervised graduate practicum in educational programs for the emotionally impaired.

866M. Independent Study: Emotional Impairment
Spring, 2 to 6 credits. May enroll for a maximum of 12 credits. Graduate students. Supervised study in emotional impairment conducted according to a written agreement stating the problem or topical area of study, the methodology and the product of the study.

867. Advanced Methods and Materials in Special Education: Mentally Handicapped Children and Youth
Winter. 3(3-0) CEP 489B, CEP 482C, CEP 490C.
An analysis of research, trends, and programs in the area of mental retardation. Emphasis upon the relationship these factors have to problem of curriculum, teaching methods, guidance of students, and general classroom management.

867K. Practicum: Mentally Impaired
Spring, 1 to 12 credits. May enroll for a maximum of 13 credits. Approval of instructor. Practicum in educational programs for the mentally impaired.

867M. Independent Study: Mental Impairment
Spring, 1 to 12 credits. May enroll for a maximum of 13 credits. Approval of instructor. Study of mental impairment through supervised independent reading and writing.

868A. Advanced Methods and Materials in Special Education: Pre-vocational/Vocational Curriculum for SE/Autistic Students
Fall. 3(3-0) Approval of instructor. Overview of autism and rehabilitation services. Assessment procedures, placement criteria and pre-vocational/vocational curriculum. Skill development for severely emotionally impaired autistic students.

868B. Advanced Methods and Materials in Special Education: The Severely Impaired/Autistic Student in the Home and School
Spring. 3(3-0) Approval of instructor. A comprehensive exploration of autism in terms of diagnosis, treatment and prognosis. The effect of autism on the family unit, the community and the school system.

868C. Advanced Methods and Materials in Special Education: Communication Strategies for Teachers of Autistic Students
Spring. 3(3-0) Approval of instructor. Design and implementation of a language and communication curriculum for autistic students. Traditional language development and alternative modes of communication stimulation.

868D. Seminar: Severely Emotionally Impaired/Autistic
Fall, Winter, Spring. 3(2-0) May enroll for a maximum of 6 credits. Approval of instructor. Coordination of course work and field experience for the SE/Autistic emphasis. Information regarding autism, task analysis, curriculum, research.

868K. Severely Emotionally Impaired/Autistic
Fall, Winter, Spring. 3 to 6 credits. May enroll for a maximum of 18 credits. Approval of instructor. Students spend 3 days a week in a public school setting for severely emotionally impaired autistic students applying skills learned in related courses.

869A. Education of Mildly Impaired Learners
Fall. 3(3-0) CEP 480.
Comprehensive introduction to the field of learning disabilities including theory, issues, programs, characteristics, terminology, and major components of the law.

869B. Principles of Formal and Informal Assessment of Mildly Impaired Students
Fall. Winter. 3(3-0) CEP 460, CEP 869B or approval of instructor.
Methods, techniques and instruments for identifying and diagnosing academic problems of analysis of formal and informal assessment strategies. Interpretation of diagnostic profiles.

869D. Teacher Consultation Skills for Mainstreamed Students
Spring. 3(3-0) CEP 869B, two years special education teaching experience or approval of instructor. Consultant skills including role identification, problem-solving techniques, individual and group communication processes, inservice activities, school survival and study skills curriculum.

869E. Personal Adjustment and Career Preparation for the Mildly Impaired Secondary Student
Winter. 3(3-0) CEP 869A, CEP 869B or concurrently.
Assessment procedures and instructional methodology appropriate for learning disabled students. Various programming options and outcomes will be contrasted. Emphasis on instruction in learning strategies. Approval through Fall 1989.

869F. Evaluation and Remediation Strategies for Mildly Impaired
Spring. 3(3-0) CEP 869A, CEP 869B.
Strategies for the evaluation and remediation of reading and written language disorders of mildly impaired students. Procedures for the selection, development, evaluation, and modification of reading and writing programs.

869G. Diagnosis and Remediation of Mathematics for Mildly Impaired Students
Winter. 3(3-0) CEP 869A, CEP 869B.

869I. Classroom Management: Elementary, Mildly Impaired
Fall. Winter. 3(3-0) CEP 869B.
Effective classroom management and instructional practices for promoting learning by mildly impaired and learning disabled elementary level learners.

869J. Behavior Management for Mildly Impaired and Learning Disabled Elementary Students
Spring. 3(3-0) Graduate special education majors only.
Applied behavior analysis for elementary mildly impaired and learning disabled students.
869K. Learning Disabilities Practicum, Elementary or Secondary
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. Approval of instructor.
Supervision in working with mildly impaired, learning disabled students in elementary or secondary schools or clinical settings.

869L. Curriculum Design and Prevocational Development for Elementary Learning Disabled
Winter. 3(3-0) CEP 869B.
History, rationale and required academic skills for vocational education. Mathematics, reading, social studies curricular adaptations. Emphasis on mildly impaired and learning disabled elementary students.

869M. Independent Study: Learning Disabilities
Fall. 3 to 12 credits. May reenroll for a maximum of 12 credits. CEP 460J, CEP 869B, CEP 869F, CEP 869G.
Supervised study in learning disabilities conducted according to a written agreement stating the problem or topical area of study, the methodology and the product of the study.

869N. Curriculum Design and Prevocational Development/Secondary Learning Disabled
Fall. 3(3-0) CEP 869B.
History, rationale and required academic skills for vocational education. Mathematics, reading and curricular adaptations. Emphasis on mildly impaired, learning disabled adolescents.

869P. Vocational and Career Education for Learning Disabled
Fall. 3(3-0) CEP 869B.
Philosophy and methods for vocational and career education of mildly impaired and learning disabled adolescents. Emphasis on assessment instruments and techniques, community resource outreach methods.

869Q. School Survival—Personal and Social Adjustment
Spring. 3(3-0) CEP 869B.
School survival for mildly impaired and learning disabled adolescents: personal adjustment, study skills and their relationship to vocations and careers.

870. Teaching Visually Impaired in Secondary Education
Fall, Winter, Spring. 1 to 15 credits. May reenroll for a maximum of 18 credits. CEP 472D or concurrently, approval of department.
Student teaching in secondary education programs for visually impaired and blind students.

870K. Teaching Young Visually Impaired Children
Fall, Winter, Spring. 1 to 15 credits. May reenroll for a maximum of 18 credits. Approval of department.
Supervised graduate student teaching with preschool or elementary school-age visually impaired and blind children.

871. Teaching Severely Multiply Impaired—Blind/Deaf in Secondary Education
Winter, Spring. 1 to 15 credits. May reenroll for a maximum of 18 credits. Approval of department.
Supervised graduate student teaching in secondary education programs for blind/deaf and severely multiply impaired learners.

871K. Teaching Severely Multiply Impaired and Blind/Deaf in Elementary Education
Spring, 1 to 15 credits. May reenroll for a maximum of 18 credits. TE 473 or CEP 876K, CEP 471A.
Student teaching in elementary education programs for blind/deaf and severely multiply impaired learners.

872. Analysis of Special Education Research
Winter of odd-numbered years. 3(3-0) Approval of department.
Analysis of research studies in each special education disability area. Study of research design and procedures; discussion of theoretical and applied issues relating to the contents of the studies.

875B. Special Education Finance
Winter. 3(3-0) Graduate students.
Analysis of major special education funding systems, the Michigan system, intermediate school district special education tax, constituent district reimbursement policies and approaches to special education budgeting.

875C. Special Education Law
Spring of odd-numbered years. 3(3-0) Approval of instructor.
Analysis of State and Federal legislation, regulations, and litigation as related to special education and impact on administration of those programs. Includes study of current and precedent setting court decisions.

875D. Administration of Educational Programs: Administration of Special Education Programs
Winter, Summer. 3(3-0) Approval of department.
Designed to promote the study of application of theory and research to specialized program areas. Persons will normally select the section allied to their major program area. Organization and administrative aspects of special education programming, federal, state, intermediate and local district level programs in special education are reviewed.

879. Independent Study: Special Education
Fall, 3 to 6 credits. May reenroll for a maximum of 12 credits. Approval of instructor.
Supervised study in special education conducted according to a written agreement stating the problem or topical area of study, the methodology and the product of the study.

884. Laboratory and Field Experience in Counseling and Educational Psychology
Fall, Winter, Spring, Summer. 1 to 9 credits. May reenroll for a maximum of 15 credits. Approval of department.
Supervised graduate practicums, observations, internships, and externships in the various areas of emphasis.

899. Master's Thesis Research
Fall, Winter, Spring, Summer. 2 to 12 credits. May reenroll for a maximum of 12 credits. Approval of department.

900A. Psychometric Theory
Fall of odd-numbered years. 3(3-0) CEP 800, CEP 905.
Advanced theoretical aspects and derivation of formulas involved in reliability, validity, item analysis, weighting and differential prediction, sampling and norm construction, and the relation of item characteristics to test statistics.

900B. Problems of Educational Measurement
Winter of even-numbered years. 3(3-0) CEP 800, approval of department.
Advanced consideration of the logical and philosophical bases of educational measurement. Theory of test planning and development and evaluation. Problems of test administration and scoring. Issues in test use.

900C. Testing and Evaluation in Counseling Psychology
(HCP 900C.) Fall, 3(3-0) Doctoral student in counseling psychology or approval of instructor.
Analysis and interpretation of selected standardized tests related to vocational counseling of college students. Self-appraisal, case studies and clinical experience under supervision will be emphasized.

900D. Advanced Topics in Classical Test Theory
Winter of odd-numbered years. 3(3-0) CEP 905, CEP 860.
Refinement and extensions of classical test theory approaches to the design and interpretation of educational measures. Primary attention given to generalizability theory and its applications.

900E. Using Standardized Tests for Decision Making
Fall, 3(3-0). CEP 401 or approval of department.
School administrative decision making based on information yielded by standardized tests. Participants will also engage in private consultations with the instructor concerning system or building data. Approved through Fall 1989.

902A. Personality Assessment I
(HCP 902A.) Fall, 3(3-0) Doctoral student in counseling psychology or approval of instructor.
The application of the MMPI to individuals. Administering and interpreting the MMPI in written and oral form.

902B. Personality Assessment II
(CEP 902B, HCP 902B.) Winter, 3(3-0) Doctoral student in counseling psychology or approval of instructor.
Administration, scoring, and interpretation of the Rorschach Personality Test. Writing psychological assessment reports. Application of Rorschach technique to treatment, assessment, and diagnosis.
Counseling, Educational Psychology and Special Education — Descriptions of Courses

904. Quantitative Methods in Educational Research
Fall, Winter, Spring, Summer. 4(4-0)
Pretest and approval of instructor.
Application of descriptive statistical techniques to educational research with emphasis on estimation and tests of hypotheses. Interpretation of statistical reports.

Winter. 4(4-0) CEP 904 or pretest, approval of instructor.
Principles and techniques in the application of inferential statistics to educational data with emphasis on the analysis of variance and multiple comparison procedures. Overview of regression techniques.

906. Quantitative Methods in Educational Research: Experimental Design in Education
Spring. 4(4-0) CEP 905.
Theory and practice in the design, analysis and interpretation of experimental and quasi-experimental research.

907A. Advanced Research Methods in Education
Spring. 4(4-0) CEP 863, CEP 904 or CEP 905.
Principles and techniques in survey research with limited consideration of content analysis and observational studies. Sampling, instrumentation, data collection, and data analysis.

908. Issues in Program Evaluation
Spring. 3(3-0) Three courses in measurement, evaluation, statistics, or research design.
Issues in program evaluation will include such topics as evaluation and political decision making, external vs. internal evaluation, qualitative vs. quantitative evaluation, evaluation vs. research, and meta-evaluation. Approved through Fall 1989.

911. Educational Psychology Seminar
Fall, Winter, Spring. 3(3-0) May reenroll for a maximum of 15 credits. Doctoral candidates or approval of instructor. Educational psychology doctoral candidates must enroll in the fall.
History of educational psychology, learning and cognition, personality and self-concept development, social psychology of classroom behavior, social learning theory, school psychology, research on teaching.

913. Seminar in Research on Teaching
Winter. 3(3-0) Approval of instructor. Interdepartmental with the Department of Teacher Education.
Critical survey of five approaches to research on teaching. Students develop a framework for organizing the literature, methods, and issues in the field.

915. Language, Literacy, and Learning
Spring. 3(3-0) CEP 811, CEP 904, FYS 414, LIN 401 or approval of instructor.
An overview of the psychological foundation of language processes (reading, writing, speaking, listening) with emphasis on the unique and the overlapping features across the four language areas.

917. Cognitive Theories of Knowledge Acquisition
Winter of even-numbered years. 3(3-0) CEP 411 or CEP 811 or approval of instructor. Interdepartmental with the Department of Teacher Education.
Cognitive research and theories about the growth of knowledge in academic disciplines and the acquisition of disciplinary knowledge by elementary and secondary school students.

919. Psychology and Pedagogy of Reading
Spring. 3(3-0) CEP 811, T E 820A, CEP 915 or approval of instructor. Interdepartmental with the Department of Teacher Education.
Psychological foundations of reading process, and instruction in reading. Cognitive processes and implications for models of reading are emphasized.

925. Conceptual Foundations of Educational Research
Fall. 3(3-0) Approval of instructor. Interdepartmental with and administered by the Department of Teacher Education.
Epistemology and ideology in educational research. Analysis of concepts of method, causation, objectivity and subjectivity in historical perspective.

931A. Seminar in Instructional Technology: Research and Development
Fall. 3(3-0) Approval of department.
History and development of instructional technology emphasizing leaders, events, research and legislation affecting use of instructional technology in education.

931B. Seminar in Instructional Technology: Research and Development
Winter. 3(3-0) Approval of department.
Analysis and appraisal of selected research studies in instructional technology with attention to purposes, rationales, assumptions, designs, methodologies and findings.

934A. Seminar in LOGO Educational Research
Fall, Summer. 3(3-0) CEP 834B.
Survey of current research and educational applications of LOGO: analysis of LOGO list-processing characteristics.

935. Seminar in Principles and Practice of Instructional Consultation
Winter. 3(3-0) CEP 834A, CEP 838B or approval of instructor.
Theoretical framework for consultation with instructional development clients. Case studies, role play simulations, debriefings. Application of the principles and development of consultation strategies and styles.

939. Policy and Legal Issues in Testing
Spring of even-numbered years. 3(3-0) CEP 401 or approval of instructor. Interdepartmental with and administered by the Department of Teacher Education.
Public policy and legal issues concerning the use of standardized testing to make critical decisions about individuals in American public education.

940. Educational Applications of Item Response Theory
Spring of even-numbered years. 3(3-0) CEP 800; CEP 905.
Assumptions, model selection, model fit, estimation of item/ability parameters, scaling, item banking and test construction with the Rasch, two-and three-parameter logistic models. Computer experience using BICAL and LOGIST.

942. Multivariate/Data Analysis in Education
Fall. 4(4-0) CEP 804, CEP 805, CEP 906.
Multivariate analysis techniques used in educational and educational psychology; emphasis on techniques for analysis of designed experiments and methods for analysis of repeated measures. Data including application and interpretation.

944C. Counseling Psychology and Supervision
(Spring.) 4(4-0) CEP 944C.
Doctoral student in counseling psychology or approval of instructor.
Development of supervisory skills through experiences in supervision of master's level counseling students in their field experiences.

948A. Counseling Theories
CEP 948A. Spring. 3(3-0) Doctoral student in counseling psychology or approval of department.
Theories of counseling, personality, and behavior change with emphasis on implications for research and practice.

948B. Psychology of Vocational Development
CEP 948B. Fall. 3(3-0) Doctoral student in counseling psychology or approval of department.
Characteristics and development of psychological concepts and vocational development.

949A. Social Development and Counseling Psychology
HCP 949A. Winter. 3(3-0) Doctoral student in counseling psychology or approval of department.
Stages of social development as a counseling construct. Developmental tasks appropriate to life phases. Implications of missing or inadequately passing through a developmental stage.

949B. Learning Foundations of Counseling Psychology
CEP 949B, HCP 949B. Spring. 3(3-0) Doctoral student in counseling psychology or approval of department.
Principles of learning and their application to the counseling process.

951. Group Processes in Counseling Psychology
HCP 951. Winter. 3(3-0) Doctoral students in counseling psychology or approval of department.
Didactic-experiential format to explore group dynamics, interpersonal processes with groups, differential effect of various leadership styles, facilitation of group interaction, impact of different theoretical approaches and application to counseling/school settings.

952. Research in Counseling Psychology
HCP 952. Spring. 3(3-0) Doctoral student in counseling psychology or approval of department.
Counselor research and practice.
953. Ethics in School and Counseling Psychology  
(HCP 953.) Spring. 3(3-0) Doctoral students in counseling psychology, school psychology, or approval of instructor. Professional ethics, standards, principles, guidelines and issues concerning the training and professional activities of counseling psychology and school psychology. Relevant legal issues and precedents.

954. Cognitive and Affective Bases of Behavior  
(HCP 954.) Spring. 3(3-0) Doctoral student in counseling psychology or approval of instructor. Diagnostic and assessment criteria; differential diagnosis; conceptual etiological aspects; implications for treatment and research.

955. Counseling Pre-Practicum  
(HCP 955.) Winter. 3(0-6) Doctoral student in counseling psychology. Seminar emphasizing establishing good interpersonal relationships. Self-understanding, an understanding of psychodynamics, and test interpretation as preparation for assuming counseling responsibilities. Approach is didactic and experimental with limited contacts with clients.

956A. Counseling Psychology Practicum I  
(HCP 956A.) Fall. 3(0-6) CEP 955, doctoral student in counseling psychology. Supervised experience working with college students in a counseling relationship. Group discussions, group supervision and observation of counseling interviews, and individual supervision.

956B. Counseling Psychology Practicum II  
(HCP 956B.) Winter. 3(0-6) CEP 956A, doctoral student in counseling psychology. Supervised experience working with college students in a counseling relationship. Group discussions, group supervision and observation of counseling interviews, and individual supervision.

956C. Counseling Psychology Practicum III  
(HCP 956C.) Spring. 3(0-6) CEP 956B, doctoral student in counseling psychology. Supervised experience working with college students in a counseling relationship in the residence halls. Individual supervision, increased client contact hours, and participation in staff activities.

957. Multicultural and Urban Issues in Counseling Psychology  
(HCP 957.) Winter. 3(3-0) Doctoral student in counseling psychology or approval of instructor. Mental health needs of minority and urban residents. Cross-cultural counseling. Psychotherapy issues and techniques for counseling multicultural adults.

958A. Advanced Practicum in Counseling Psychology  
(HCP 958A.) Winter. Spring. 3 to 6 credits. May reenroll for a maximum of 9 credits. CEP 955C, doctoral students in counseling psychology. Applied aspects of counseling through case conferences and presentations of cases by representatives of various counseling orientations.

958B. Advanced Practicum in Counseling Psychology  
(HCP 958B.) Winter. Spring. 3 to 6 credits. May reenroll for a maximum of 9 credits. CEP 955C, doctoral students in counseling psychology. Applied aspects of counseling through case conferences and presentations of cases by representatives of various counseling orientations.

959A. Cross Cultural Counseling and Psychotherapy  
(HCP 959A.) Fall. 3(3-0) CEP 957. Psychosocial issues involved in counseling racial, ethnic and cultural minority clients.

959B. A Counseling Perspective on the Minority and Urban Family  
(HCP 959B.) Winter. 3(3-0) CEP 959A. Minority and urban families' dynamics and relations outside the family. Impact of the social and cultural environment on family members.

959C. Counseling Interventions with Multicultural and Urban Populations  
(HCP 959C.) Spring. 3(3-0) CEP 959B. Developing appropriate and effective counseling intervention strategies based on examination of traditional and nontraditional approaches to treatment and assessment when applied to minority and urban clients.

961. Issues in Health Psychology  
(HCP 961.) Spring. 3(3-0) Doctoral student in counseling or clinical psychology or approval of instructor. The role of the counseling and clinical psychologist in health care systems.

962. Systemic Models in Counseling Psychology  
(HCP 962.) Winter. 3(3-0) Doctoral student in counseling psychology or approval of instructor. Development and utility of systemic models for understanding the counseling process.

975A. Field Experience: Special Education Administration Simulation  
Spring. 3(0-9) Approval of instructor. Supervised graduate practicum in administration of the Special Education program of a simulated school district.

975B. Field Experience: Special Education Administration  
Fall, Spring. 3 to 12 credits. May reenroll for a maximum of 18 credits. Approval of department. Supervised graduate practicum in special education administration.

976. Policy Issues in Special Education  
Fall. 4(4-0) Graduate students and approval of instructor. Policy concerns in special education including economic, social, legal, and organizational issues. Policy implications within the theoretical framework of organizational change.

981. Topics in Counseling Psychology (MTC)  
(HCP 981.) Fall, Winter, Spring. Summer. 3 to 6 credits. May reenroll for a maximum of 9 credits. Critical issues in counseling psychology.

982. Seminars in Counseling, Educational Psychology and Special Education (MTC)  
Fall, Winter, Spring. Summer. 1 to 9 credits. May reenroll for a maximum of 15 credits if different topics are taken. Approval of department. Seminars in the various fields of emphasis in counseling, educational psychology and special education.

983. Readings and Independent Study in Counseling and Educational Psychology  
Fall, Winter, Spring. 1 to 9 credits. May reenroll for a maximum of 15 credits. Approval of department. Study on an individual or group basis in the various fields of emphasis.

984. Laboratory and Field Experience in Counseling and Educational Psychology  
Fall, Winter, Spring. 1 to 9 credits. May reenroll for a maximum of 15 credits. Approval of department. Supervised graduate practicum, observations, internships, and externships in the various areas of emphasis.

999. Doctoral Dissertation Research  
Fall, Winter, Spring, Summer. Variable credits. Approval of department.

CRIMINAL JUSTICE

College of Social Science

110. Introduction to Criminal Justice  
Fall, Winter, Spring, Summer. 3(3-0) Agencies and processes of criminal justice, emphasizing historical, constitutional (legal), and political considerations. Criminal Justice is also analyzed as a system, with the problems and prospects for change.

210. Introduction to Forensic Science  

312. Criminalistics I  
Fall. 3(3-0) Criminalistics majors. Criminalistics laboratory techniques. Photography, crime scene recording, reproduction of evidence, latent fingerprints.

313. Criminalistics II  
Winter. 3(3-0) Criminalistics majors. Criminalistics laboratory techniques. Firearms, Hair and fiber identification. Comparative microscopy.

314. Criminalistics III  

315. Criminal Investigation  
Fall, Winter. 4(4-0) Criminalistics majors. Theory of investigation, crime scene conduct, collection and preservation of physical evidence and methods used in scientific interpretation of evidence.