812. Graduate Seminar Topics
Fall, Winter, Spring. (1-0-0) May be repeated for a maximum of 12 credits. Topics vary each semester. Graduate level seminars on current research and applications. Approval of department and graduate student is required.

815. Biological Control
Spring of even-numbered years. (2-3) Approval of department. Properties of entomophagous species; relationships to population ecology and systematics; foreign exploration, colonization, manipulation, and evaluation; interactions with pesticides, analysis of successful programs, and future trends. Collection for taxonomic lab to be made the summer before.

820. Applied Insect Ecology
Winter of odd-numbered years. (3-2-3) Approval of department. Ecological factors in an insect's ecosystem that can be manipulated for the purpose of pest management. Critical evaluation of current and classical literature presented by students in both oral and written reports.

838. Principles of Taxonomy
Spring of odd-numbered years. (3-0) Approval of department. Methods and principles of systematic zoology and entomology, including a historical survey of the pre-Linnaean and post-Linnaean systems of classification. International rules of zoological nomenclature and their emendations.

871. Biology of Nematodes
Spring. 4(2-6) ENY 470 or approval of department. Interdepartmental with the Department of Botany and Plant Pathology. Ontogeny, taxonomy, morphology, pathology and ecology of nematodes, with special reference to plant-panaric and phytotoxic species.

881. Biology of the Arthropoda
Winter. 3(3-6) ZOL 481 or approval of department. Interdepartmental with and administered by the Department of Zoology. Ecology, life cycles, morphology, taxonomy, and distribution of arthropods other than insects.

900. Problems
Fall, Winter, Spring, Summer. 1 to 6 credits. May be repeated for a maximum of 12 credits. Approval of department. Advanced individual work in apiculture, aquatic insects, insect biochemistry, bioecosystems, economic insects, insect ecology, forest insects, morphology, nematology, insect physiology, plant disease transmission, insect toxicology, arachnida, acarina, medical entomology, chemistry of insecticides, insect biology, extension entomology, systems.

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

941. Analytical Techniques for Biological Compounds I
Fall, Winter, Spring. (3-0) Organic chemistry. Approval of department. Application, extraction, cleanup and purification techniques employed in analysis of biologically active compounds. Stresses use of radiotopes, and column, paper, thin-layer, and molecular sieve chromatography.

942. Analytical Techniques for Biological Compounds II
Winter. 4(2-5) ENY 949. Analytical techniques used for identification and quantification of biologically active compounds. Emphasis on spectroscopy and gas-liquid chromatography.

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
Descriptions – FAMILY AND CHILD ECOLOGY

Courses

446. Approaches to the Study of the Family
Fall, Winter, Summer of odd-numbered years. 4(4-0) FCS 145 or FCS 263, FCS 444.
The family is studied from several approaches. Case studies, socio-literary materials, research studies and observations of living situations are included.

461. Individual Child Study
Fall, Winter, Spring. 3(2-2) Majors: FCS 364; others: FCS 262A, PSY 344 or ED 412.
An in-depth analysis of development and behavior utilizing regular observation of a young child. Applications of theories of child growth and behavior.

464. Problems in Teaching in a Child Development Center
(464B) Fall, Winter, Spring. 3(2-0) FCS 464A or FCS 464C or concurrently.
Analysis of problems in teaching in an early childhood program. Application of child guidance techniques and principles.

464A. Practicum in a Child Development Center
Fall, Winter, Spring. 7(0-21) FCS 369A. FCS 369B each with a minimum grade of 2.0; FCS 464 concurrently. Advance application required. Not open to students with credit in FCS 464A.
A directed practicum in planning, implementing and evaluating the learning environment in a class of young children during an entire term.

464C. Practicum in a Child Development Center
Fall, Winter, Spring. 4(0-12) FCS 369A. FCS 369B each with a minimum grade of 2.0; FCS 464 concurrently. Advance application required. Not open to students with credit in FCS 464A.
A directed practicum in planning, implementing and evaluating the learning environment in a class of young children. For experienced teachers.

467. Administration of Child Development Centers
Spring. 3(3-0) FCS 464A, FCS 464B or concurrently; or approval of department. Administrator's role in child development centers. Application of child care philosophy, management and communication skills to operation of early childhood education programs. Federal, state, and local regulations and support services.

468. Teacher-Parent Interaction
Fall, Winter, Spring. 3 credits. Majors: FCS 464A, FCS 464B or concurrently; others: FCS 267A or ED 412.
Analysis of parent-teacher communication and interaction, parent involvement, and parent education related to early childhood education programs operated by schools, churches, or community agencies. Field experience when feasible.

470. Current Issues in Family and Child Sciences
Winter. Spring. 3(3-0) FCS 464A. or Seniors, or approval of department.
Analysis of current events, issues, and legislation which has bearing on homes, families and child development and children's programs. Implications for professional decisions and actions.

480. Human Development and Interpersonal Relationships: The Middle and Later Years
Spring. Summer of odd-numbered years. 4(4-0) Introduction: sociology and psychology, FCS 145 or FCS 263 or FCS 444. Social-psychological-biological development and socialization for roles in middle and later years. Generational relationships: societal influences. Case study approach involving interaction with an adult or family in middle or later years.

495. Independent Study
Fall, Winter, Spring. Summer. 4 to 12 credits. May reenroll for a maximum of 12 credits. Approval of department. Study of a selected topic under the guidance of a faculty advisor in the area of specialty.

498. Field Study
Fall, Winter, Spring. Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. Approval of department. Study of off-campus situations in a variety of ways using involvement in volunteer, governmental, or business-sponsored community agencies to further insights into interaction among the individual, the family and the community.

801. Seminar in Family Life
(801A) Fall, Winter, Spring. 3(3-0) May reenroll for a maximum of 12 credits. Approval of department.

802. Seminar in Child Development
(802B) Fall, Winter, Spring. 3(3-0) May reenroll for a maximum of 12 credits. Approval of department.

810. Workshop
Summer. Variable credit. Approval of department. Content varies depending on nature of workshop.

1DC. Aging and Communication
For course description, see Interdisciplinary Courses.

813. Special Studies in Family Life
(813B) Fall, Winter, Spring. Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.

819. Theories of Child Development
(862) Fall. 3(3-0) FCS 262A or child psychology. Comparative study of conceptual frameworks utilized in child development.

820. Human Development in the Family: Personal Development
Fall. 4(4-0) Six credits in child development or approval of department. Selected aspects of family members' physiological potential, development, status explored. Family's contributions to members' physiological potential for growth and development and to realization of human potential are seen as fundamental.

821. Human Development in the Family: Personality
Winter. 4(4-0) Six credits in child development or approval of department. Influence of child-rearing practices and parental relationships in developing human personality. Application of research findings and theoretical approaches to psychological development in the family and family-related situations.

822. Human Development in the Family: Socialization
Spring. 4(4-0) Basic course in sociology; 6 credits in child development or family life or approval of department. Influence of family structure and interaction upon socialization from infancy to adulthood. Relationships of family to processes in larger social environment, and influence of these on human social development.

830. Individual Readings
Fall, Winter, Spring. Variable credit. Approval of department.

831. Death, Dying, and the Family
Spring. 3(3-0)
Provides students with an understanding of various theoretical frameworks of reference developed for viewing death within the family and strategies designed to assist them to deal with it.

840. Topics in Child Development
Fall. Variable credit. 3(3-0) May reenroll for a maximum of 6 credits if different topic is taken. A child growth and development course.

841. Early Childhood Education: Curricular Approaches
Spring. 3(3-0) FCS 262A or a child growth and development course.

842. Assessment of Development of the Young Child
Fall. 3(3-0) A child growth and development course.
Survey of assessment instruments and procedures for children from birth to age seven. Techniques for practitioner or parent to use to assess physical, social, emotional and intellectual development.

843. Play and Human Development
Winter of odd-numbered years. 3(3-0) One course in child development or human development.
Role of play in human development. Functions of play related to other aspects of development. Analysis of theory related to play behavior.

850. Aging in the Family
Fall. 3(3-0) FCS 480 or approval of instructor.
Provides students with a knowledge and understanding of the literature in aging in the family and developments and applications of the interrelationships involved in this multidisciplinary area.

852. Communication and Family Crisis
Winter. 3(3-0) Approval of department.
Dynamics of family communication and adjustment to crisis during the life cycle. Delineation of major types of family crises and their consequences. Strategies for positive communication and resolution.
854. Research Literature in Family Relationships
Fall, Winter, Spring, FCS 444, FCS 446 and basic research methods course or approval of department.
Historical overview and current developments in research in family relationships, with emphasis on theoretical bases and critical issues.

855. Topics in Family Relationships
Fall, 2 to 4 credits, FCS 444 or FCS 445 or approval of department.
In-depth analysis of a topic related to the American family as an interactive system within the larger society.

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

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer.
Variable credit.
Research in home management and economics of the family.

Family Ecology FE

118. Family Resources
Spring, 3(2-2)
Skill development in identification, description and classification of human and non-human family resources on a historical and cross-cultural basis.

200. Ecological Approach to Family and Health
Fall, Winter, Spring, FCS 440.
Use of the human ecosystem perspective to study people and their various environments with focus on family and health support systems.

221. The Role of the Helping Professions and Organizations in Community Services
(HEC 301) Fall, Winter, Spring, FCS 440.
Interdepartmental with and administered by the Department of Urban and Metropolitan Studies. Analysis of human and community needs; review and examination of existing and emerging resources to meet those needs; role of professionals and volunteers in providing community and human services.

238. Personal Finance
Fall, Winter, Spring, FCS 440.
Strategies, techniques and resources useful in the management of personal finance.

332. Theory and Application of Home Management
Fall, Winter, Spring, FCS 440.
Analysis of family, home and community needs; review and examination of existing and emerging resources to meet those needs; role of professionals and volunteers in providing community and human services.

400H. Honors Work
Fall, Winter, Spring, Summer.
Variable credit. May enroll for a maximum of 16 credits. Summer, approval of department.

436. Consumer Economic Problems
Fall, Winter, Spring, Summer of even-numbered years, 3(3-0) EEC 300 or EEC 201.
Nature of current consumer problems. Sources of information and methods of evaluating information in the search for solutions to problems and for improved consumer protection.

437. Energy Utilization in the Household
Fall, Summer of even-numbered years, 3(3-0) HEC 301 or approval of department.
Human and fossil fuel energy use in the household level issues and policies regarding work accomplishment in the home.

438. Family Financial Management
Fall, Spring, Summer of odd-numbered years, 3(3-0) HEC 301 or approval of department.
Major Concerns; alternatives available to families during the founding, active, and retirement stages. Implications for the community of the family's financial decisions.

450. Selected Topics in Family Ecology
Fall, Winter, Spring, FCS 440; or 4(4-0) May enroll for a maximum of 12 credits. Approval of department.

460. Independent Study
Fall, Winter, Spring, Summer.
Variable credit. May enroll for a maximum of 12 credits. Approval of department.

498. Field Study
Fall, Winter, Spring, Summer, FCS 440.
Preprofessional experience in a community agency. Organization engaged in activities related to student's program. Weekly reports and seminar dealing with student learning experiences, professional development, and roles of selected agencies.

800A. Seminar in Family Ecology
Fall, Winter, Spring, Summer of even-numbered years, 3(3-0) May enroll for a maximum of 12 credits. Approval of department.

804. Human Resource Development in Family
Fall, Winter, Summer of odd-numbered years, 3(3-0) EEC 300, EEC 201, FCS 444.

813A. Special Studies in Family Ecology
Fall, Winter, Spring, Summer.
Variable credit. Approval of department.

819. Research Methods
Fall, Spring, Summer of even-numbered years, 3(3-0) Approval of department.
Interdepartmental and joint enrollment with the Department of the Department of Human Environment and Design.
Elements of the research process; problem formation, theoretical frameworks, operationalizing concepts, hypotheses formulation, research design, instrumentation, sampling, analysis, interpretation, and reporting of findings.

820. Critique of Research
Winter, Summer, 3(2-0) EEC 819.
A critical analysis of research on the family and its environment. Emphasis is placed on critique of methodology with some consideration of research needs.

822. New Developments
Spring of odd-numbered years, 3(3-0) ED 436.
Trends in the field of family ecology and the relevance to current social needs.

823. Curriculum
Summer, 3(3-0) Approval of department.
Clariication and use of a rationale in curriculum development. Special problems in application.

824. Programs in Home and Family Life Education
Winter of odd-numbered years, 3(3-0) Approval of department.
Develops depth in home and family living courses offered in secondary school programs.

825. Methods of Teaching Adults
Spring, 3(3-0) Approval of department.
Developmental needs of adults and changes in society affecting families as a basis for development of adult programs in homemaking education. Experiences will be provided with programs in progress.

826. Leadership in Home Economics Education
Fall of even-numbered years, 3(3-0) Approval of department.
Inquiry into the process of becoming a change agent in various educational settings related to home economics. Leadership principles, current roles and responsibilities of leaders in home economics, communication techniques and organizational principles.

827. Evaluation
Spring, 3(3-0) Approval of department.
Evaluation practices and procedures for various levels of educational programs in the area of human ecology.

830. Individual Readings
Fall, Winter, Spring, Summer.
Variable credit. Approval of department.

831. Values and Family Behavior
Winter, Spring of odd-numbered years, 4(3-0) Approval of department.
Role and function of values as fundamental to understanding behavior in the family. Cognition and actualization of values. Resolution of values conflicts. Conceptual and methodological approaches to study of values.

832. Theories of Management and Decision Making in the Family
Spring, Summer of even-numbered years, 4(4-0) HEC 301.
Comparative study of conceptual frameworks of family decision-making and management, including social, economic and technical decision domains.

835. Family Ecosystems
Fall, Spring, Summer of even-numbered years, 3(3-0) Approval of department.
Family viewed from an ecosystems perspective. Emphasis placed on energy and communication cycles within the family. Integration of family planning, family dynamics and developmental concepts.
Courses

837. Allocation of Family Resources
Spring of even-numbered years. Summer of odd-numbered years. 4(4-0) F E 437, F E 438
Contributors to and recipients of family resources both human and non-human. Patterned use of resources and the effects of definite factors such as standard of living on those patterns.

838. Analysis of Family Income
Spring of even-numbered years. Summer of odd-numbered years. 3(3-0) F E 438. Forms of family income and economic problems relative to the protection of family economic security through insurance and investments, property rights and descent of property, and estate planning.

840. Workshops in Family Ecology
Summer. 2 to 10 credits. May enroll for a maximum of 10 credits. Approval of department. Laboratory approach which provides opportunity for experienced educational personnel to concentrate their study on common professional problems.

842. Laboratory and Field Experience
Fall, Spring. 4 credits. Approval of department. Supervised graduate practicums, observation, internships, and externships.

843. Independent Study in Family Ecology
Fall, Winter, Spring, Summer. 1 to 5 credits. May enroll for a maximum of 9 credits. Approval of department. Study on an individual or group basis.

865. Community Systems for Community Development
(841) Winter. 4(2-2) RD 864 or approval of department. Interdepartmental and jointly administered by the Department of Resource Development. Basic systems of the community, their functions and interrelatedness: the family, economic, government, education, and supportive service systems. Field trips required.

866. Community Development Field Study
(861) Spring. 4(2-4) RD 865 or approval of department, Interdepartmental and jointly administered by the Department of Resource Development. On-site study of major community systems. Individual or group investigation of community efforts, problems, and opportunities. Field project required.

899. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

FAMILY MEDICINE F M

892. Principles of Family Practice III
Fall, Summer. 1(0-4) F M 632 or approval of department. Continuation of F M 642.

893. Seminars in Family Ecology
Spring. 2 or 3 credits. May enroll for a maximum of 9 credits. Approval of department. Seminars in selected topics.

894. History and Philosophy of Human Ecology
Fall. Summer of even-numbered years. 3(2-0) History and development of human ecology as an interdisciplinary field of study. Values underlying the field. Current emphasis.

900. Special Problems in Family Medicine
Fall, Winter, Spring, Summer. 1 to 8 credits. May enroll for a maximum of 24 credits. Approval of department. Each student will work under direction of a faculty member on an experimental, theoretical, or applied problem.

901. Internship
Fall, Winter, Spring. 1 to 5 credits. May enroll for a maximum of 9 credits. Approval of department. Supervised advanced graduate practicums, observation, internships, and externships in the various areas of emphasis.

902. Independent Study in Family Ecology
Fall, Winter, Spring, Summer. 1 to 5 credits. May enroll for a maximum of 9 credits. Approval of department. Study on an individual basis.

903. Seminars in Family Ecology
Spring. 2 or 3 credits. May enroll for a maximum of 9 credits. Approval of department. Seminars in selected topics.

904. History and Philosophy of Human Ecology
Fall. Summer of even-numbered years. 3(2-0) History and development of human ecology as an interdisciplinary field of study. Values underlying the field. Current emphasis.

905. Directed Studies
Fall, Winter, Spring, Summer. 2 to 24 credits. May enroll for a maximum of 48 credits. Admission to a college of medicine or approval of department. Individual or group projects on special problems related to family medicine.

906. Principles of Family Practice I
Winter. 1(0-3) Admission to a college of medicine. Cognitive material and development of the psychomotor skills necessary to prepare the student physician for assignment to a family practice clinical setting.

912. Family Practice Research
Fall, Winter, Spring. 1(0-4) F M 632. Continuation of F M 632.

FAMILY PRACTICE FMP

500. Preceptorship Training
Fall, Winter, Spring. Summer. 3 to 12 credits. May enroll for a maximum of 36 credits. No more than 3 credits toward degree requirement. One year of medical school. Interdepartmental and administered by the Department of Human Medicine. Field experience in primary care taught by primary care physicians throughout the state to medical students from Michigan State University, University of Michigan and Wayne State University.

530. Care of the Elderly
Fall, Spring. 3(2-2) Student in H M, OST or other clinical program or approval of instructor. Interdepartmental with the Department of Community Health Science. Case studies of the care of the elderly based on the physician-patient-interaction with elderly persons and their families. Family systems applications to health care. Associated clinical experience.

540. Families in Crisis: A Clinical View
Winter, Spring. 1 to 4 credits. May enroll for a maximum of 4 credits. Student in medicine, nursing, or graduate student in psychology, counseling, social work or related field. Interdepartmental with the Department of Psychiatry. Dynamics of family crises as might be experienced in health care settings. Videotapes, readings and small group discussions to illustrate family dynamics.