

881. Biology of the Arthropoda
Winter. 5(3-6) ZOL 481 or approval of department. Interdepartmental with and administered by the Zoology Department. Ecology, life cycles, morphology, taxonomy, and distribution of arthropods other than insects.

890. Problems
Fall, Winter, Spring, Summer. 1 to 6 credits. May re-enroll for a maximum of 12 credits. Majors or approval of department. Advanced individual work in: apiculture, aquatic insects, insect biochemistry, biosystematics, economic insects, insect ecology, forest insects, morphology, nematology, insect physiology, plant disease transmission, insect toxicology, araneida, acarina, medical entomology, chemistry of insecticides, insect biology, extension entomology, systems.

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

940. Analytical Techniques for Biological Compounds I
Fall. 4(2-6) Organic chemistry, approval of department. Application, extraction, cleanup and purification techniques employed in analysis of biologically active compounds. Stresses use of radioisotopes, and column, paper, thin-layer, and molecular sieve chromatography.

941. Analytical Techniques for Biological Compounds II
Winter. 4(2-6) 940. Analytical techniques used for identification and quantification of biologically active compounds. Emphasis on spectroscopy and gas-liquid chromatography.

999. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

FAMILY AND CHILD SCIENCES FCS

College of Human Ecology †

145. The Individual, Marriage and the Family
Fall, Winter, Spring. 4(4-0) Freshmen or Sophomores or approval of department. Students may not receive credit in both 145 and S W 228. Individual as young adult. Alternative living patterns. Marriage as social institution. Courtship and marriage patterns. Adjustments in marriage. Attitudes and roles in family living. Crises situations. Family planning.

245. Children, Youth and the Family
(261.) Fall, Winter, Spring. 3(3-0) Sophomores, SOC 241. Focuses on family system. Stages of family development studied include childbearing through launching. Interaction of parent, children and societal forces, particularly in middle childhood and adolescent stages emphasized.

†Name changed July 1, 1970. Formerly College of Home Economics.

262A. Child Growth and Development: Conception Through Early Childhood
(362A.) Fall, Winter, Spring. Summer of odd-numbered years. 3(3-0) A biological science or physiology course and SOC 241; ED 200 or PSY 160 or 170.

Physical, cognitive, social, and emotional aspects of human growth and development from conception through early childhood.

262B. Child Growth and Development Laboratory
(362., 362B.) Fall, Winter, Spring. Summer of odd-numbered years. 1(0-3) 262A concurrently or approval of department.

Observation of human development in infants and young children.

364. Interacting with Young Children in Child Development Centers
Fall, Winter, Spring. 3(2-3) 262A and 262B or PSY 245.

Application of principles of human growth and development to personal interaction with children ages three to six individually and in small groups in schools of early childhood.

369A. Learning Activities for Early Childhood Programs
(369.) Fall, Winter, Spring. 3(3-0) Majors: 262A and B and 364; others: ED 412.

Planning learning activities and teaching strategies for children ages 3 to 6 in early childhood education programs.

369B. Learning Activities for Early Childhood Programs — Laboratory
(369.) Fall, Winter, Spring. 1(0-3) 369A concurrently and approval of department.

Experience in planning and carrying out learning activities with young children in an early childhood program.

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

401. Minority Families in America
Winter. 3(3-0) S S 213 or approval of department.

Historical, structural, functional components of minority family systems in white America. Centers on a particular minority family system each term. Life styles, pressures, adaptations, viability and continuity of minority family subculture.

444. Interpersonal Relationships in the Family
Fall, Spring. Summer of even-numbered years. 3(3-0) 145 or 245 or approval of department.

Relationships between and among family members as they are affected by other systems, and by physical, cultural, social-psychological forces within the family eco-system. Contemporary family life issues.

446. Approaches to the Study of the Family
Fall, Winter. Summer of odd-numbered years. 4(4-0) 145 or 245, 444.

The family is studied from several approaches. Case studies, films, literary materials, research studies and observations of living situations are included.

461. Individual Child Study
Fall, Winter. 3(2-2) Majors: 364; others: 262A, PSY 245 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.

464A. Practicum in a Child Development Center
Fall, Winter, Spring. Summer of odd-numbered years. 3 to 6 credits. Majors: 364, 369A, 369B; others: 262A and 262B, or ED 412, approval of department.

A directed practicum in planning, implementing and evaluating the learning environment, in a class of young children during an entire term.

464B. Problems in Teaching in a Child Development Center
Fall, Winter, Spring. Summer of odd-numbered years. 2(2-0) 464A concurrently.

Analysis of problems in teaching in an early childhood program. Application of child guidance techniques and principles.

465. Human Sexuality and the Family
(365.) Fall, Winter. 3(3-0) Juniors and approval of department.

Personal, interpersonal, societal meanings of human sexuality, utilizing outgoing small peer group interaction. Non-lecture, value clarification approach, integrating reflection on research findings, family, peer and cultural influences.

467. Administration of Child Development Centers
Spring. 3(3-0) 464A and 464B or concurrently.

Analysis of the administrator's role in child development centers. Application of philosophical approaches, communication techniques and management skills to operating early childhood education programs. Licensing and other regulations.

468. Teacher-Parent Interaction
Fall, Winter. 3 credits. Majors: 464A and 464B, or concurrently; others: 262A or ED 412, approval of department.

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.

469. Physical and Physiological Growth of Children
(463.) Winter, Spring. 4(3-2) HNF 102; three terms of Natural Science. Interdepartmental with Human Nutrition and Foods.

Physical and physiological growth patterns. Experimental evidence for nutritional requirements. Applications to feeding practices, and physical activity of children.

470. Current Issues in Family and Child Sciences
Spring. 3(3-0) 464A, or Seniors, or approval of department.

Analysis of current events, issues; of legislation which has bearing on homes, families and children 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(3-1) Introductory sociology and psychology; 145 or 245 or 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.

Descriptions — Family and Child Sciences of Courses

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

498. Field Study
Fall, Winter, Spring, Summer. 4 to 12 credits. May re-enroll for a maximum of 12 credits. Approval of department.
Study in off-campus situations in a variety of ways using involvement in volunteer, governmental or business-sponsored community service agencies to further insights into interaction among the individual, the family and the community.

801A. Seminar in Family Life
(800B.) Fall, Winter, Spring. 3(3-0)
May re-enroll for a maximum of 12 credits. Approval of department.

801B. Seminar in Child Development
(800B.) Fall, Winter, Spring. 3(3-0)
May re-enroll for a maximum of 12 credits. Approval of department.

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

813B. Special Studies in Family Life and Child Development
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

820. Human Development in the Family: Physiological 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 parent-child relationships on 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. Relationship of family to processes in larger social environment, and influence of these on human social development.

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

862. Advanced Child Study
Spring. Summer of odd-numbered years. 3(3-0) 262A and B or ED 412 or approval of department.
Current trends in field of child development based on research and on significant new books. Careful observations of children in a variety of informal situations will be made within the limits of available resources.

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

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

FAMILY ECOLOGY* F E

College of Human Ecology†

110. Man in His Near Environment
(H E 110.) Fall, Winter, Spring. 3(3-0) New students in Human Ecology.
Ecological approach to the study of man and his near environment stressing the quality of life as it relates to individual, family and environmental forces.

IDC. The Role of Helping Professions and Organizations in Community Services
For course description, see Interdisciplinary Courses.

238. Personal Finance
Fall, Winter, Spring. 3(3-0)
Strategies, techniques and resource materials useful in improved management of personal finances. Special emphasis on stretching meager resources.

331. Management and Decision Making in the Family
(FCS 331.) Fall, Winter, Spring. Summer of even-numbered years. 4(4-0) Juniors and EC 201, or SOC 241, or three terms of social science.
Presentation of the integrated nature of home management; concerns, values, and goals as reflected in decision-making about family resources.

332. Theory and Application of Home Management
(FCS 332.) Fall, Winter, Spring. 4(1-4) with residence; 4(2-4) without residence. FCS 245; F E 331 or concurrently; or approval of department.
Principles of effective home management and their application in a living situation. Residence in a home management house provided.

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

401. Contemporary Issues in Human Ecology
(H E 401.) Fall, Winter, Spring. 3(3-0) Seniors.

436. Consumer Economic Problems
(FCS 439., 439.) Fall, Winter, Spring. 3(3-0) EC 200 or 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. Management of Work Capacity in the Home
(FCS 437.) Winter, Summer of even-numbered years. 3(3-0) 331 or approval of department.
Analysis of the resource of human work capacity in the home—physiological and psychological factors; principles and use of work simplification.

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438. Family Financial Management
(FSC 438.) Fall, Winter, Spring. Summer of even-numbered years. 4(4-0) 331; EC 201 or PAM 201.
Major financial alternatives available to families during the founding, active parenthood, and retirement stages. Implications for the community of the family's financial decisions.

450. Selected Topics in Family Ecology
(H E 450.) Winter. 3 credits. Seniors. Current issues of concern to professional family ecologists.

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

498. Field Study
Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 12 credits. Approval of department.

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

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

816. Field Techniques in Community Resource Development
Spring. 6(3-6) 835 or R D 815 or approval of instructor. Interdepartmental and jointly administered with the Department of Resource Development.
Application of community and family resource inventory, analysis, and program planning techniques in Michigan rural-urban situations.

819. Research Methods
(FCS 819.) Fall, Spring. 3(3-0) Approval of department. Interdepartmental and jointly administered with Human Environment and Design Department.

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

822. New Developments
(H E 822, ED 822E.) Summer 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
(H E 823, ED 822K.) Fall, Summer. 3(3-0) Approval of department.
Clarification and use of a rationale in curriculum development. Special problems in application.

824. Programs in Home and Family Life Education
(H E 824, ED 822M.) Spring of odd-numbered years. Summer. 3(3-0) Approval of department.
Develops depth in home and family living courses offered in secondary school programs.