881. Biology of the Arthropoda
Winter, 3(3-6) ZOL 481 or approval of department. Interdepartmental with and approved 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. May or approval of department. Advanced individual work in: aquaculture, aquatic insects, insect biochemistry, biosystematics, economic insects, insect ecology, forest insects, morphology, nematology, insect physiology, plant disease transmission, insect technology, aracnida, 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 sieves 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 spectrometry and gas-liquid chromatography.

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

FAMILY AND CHILD SCIENCES

College of Human Ecology

145. The Individual, Marriage and the Family
Fall, Winter, Spring. 4(4-0) Freshman or Sophomore or approval of department. Students may not receive credit in both 145 and 185 W 228.


245. Children, Youth and the Family
(261) Fall, Winter, Spring. 3(3-6) 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.
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.

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

FAMILY ECOLOGY*

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.

128. Family: Socialization
Fall, Winter, Spring. Variable credit. Approval of department.

131. Family 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.

141. 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.

142. 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.

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

152. Advanced Child Study
Spring. Summer of even-numbered years. 3(3-0) 263A 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.

199. Research
Fall, Winter, Spring. Variable credit. Approval of department.

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.

500A. Seminar in Family Ecology
(FCS 500A) Fall, Winter, Spring. Summer of even-numbered years. 3(3-0) May re-enroll for a maximum of 12 credits. Approval of department.

513A. Special Studies in Family Ecology
(FCS 513A) Fall, Winter, Spring. Variable credit. Approval of department.

516. Field Techniques in Community Resource Development
Spring. 4(3-0) 535 or B 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.

519. Research Methods
(FCS 519) Fall, Spring. 3(3-0) Approval of department. Interdepartmental and jointly administered with Human Environment and Design Development.

520. Critique of Research
Winter, Summer. 3(3-0) 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.

522. New Developments
(H E 829, ED 892E) Summer of odd-numbered years. 3(3-0) ED 436. Trends in the field of family ecology and the relevance to current social needs.

523. 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.

524. 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.