816. Community Development Field Study
Spring, 4(2-4) R D 814 or approval of department. Interdepartmental and jointly administered with 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.

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

820. Critique of Research
Winter, Summer. 3(2-0) F E 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
Fall 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.
Clarification 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
Summer. 3(3-0) Approval of department.
Evaluation procedures and practices for various levels of educational programs in the area of human ecology.

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

831. Values and Family Behavior
Winter. Summer of odd-numbered years. 4(4-0) Approval of department.
Role and function of values as fundamental to understanding behavior in the family. Cognition and actualization of values. Resolution of value 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 management, family dynamics and developmental concepts.

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 effect of definite factors such as standard of living on those patterns.

838. Analysis of Family Income
Spring of odd-numbered years. Summer of even-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 reenroll for a maximum of 10 credits. Approval of department.
Laboratory approach which provides opportunities 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 practitioners, observation, internships, and externships.

843. Independent Study in Family Ecology
Fall, Winter, Spring. Summer. 1 to 5 credits. May reenroll for a maximum of 8 credits. Approval of department.
Study on an individual or group basis.

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

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

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

903. Seminars in Family Ecology
Fall, Summer. 2 or 3 credits. May reenroll for a maximum of 9 credits. Approval of department.
Seminars in selected topics.

932. 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.

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

FAMILY MEDICINE

College of Osteopathic Medicine

530. Physical Examination Skills
Fall. 2(1-2) Admission to medical school and approval of department.
Introductory course in physical examination skills used in the family physician's office. The lecture relates principles of physical examination to the laboratory where skills are taught.

590. Special Problems in Family Medicine
Fall. Winter, Spring, Summer. 1 to 8 credits. May reenroll for a maximum of 32 credits. Approval of department.
Each student will work under direction of a faculty member on an experimental, theoretical or applied problem.

600. Clinical Practicum in Family Medicine
Fall, Winter, Spring, Summer. 2 to 12 credits. May reenroll for a maximum of 24 credits. Admission to a college of medicine or approval of department.
Opportunity for direct involvement and experience in functioning family practice. Emphasizes patient, office, and personnel management. Provides understanding and consideration of responsibilities encountered in the practice of family medicine.

620. Directed Studies
Fall, Winter, Spring, Summer. 2 to 24 credits. May reenroll 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.

632. 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.

642. Principles of Family Practice II
Spring. 1(0-4) F M 632.
Continuation of F M 632.

652. Principles of Family Practice III
Summer. 1(0-1) F M 632 or approval of department.
Continuation of F M 642.
FISHERIES AND WILDLIFE

College of Agriculture and Natural Resources

100. Introduction to Fisheries and Wildlife
Fall. 1(1-0) Freshmen. 4 credits. Hicks. Focus on major aspects of aquatic ecosystems--physical, chemical and biological aspects. Fieldwork will be centered on local streams.}

101. Fish and Wildlife of North America
Winter. 5(3-4) S 212 or approval of department. Comparative study of fish and wildlife groups in North America, their significant life history stages, morphology, migrations, habitats and populations. Common species are identified in the laboratory.

301. Fish and Wildlife of North America
Winter. 5(3-4) S 212 or approval of department. Comparative study of fish and wildlife groups in North America, their significant life history stages, morphology, migrations, habitats and populations. Common species are identified in the laboratory.

325. Vertebrate Pest Control
Fall. 3(3-0) B S 212 or approval of department. Role of wild vertebrate animals as agents damaging to man's interests; concepts of damage control and damage control techniques. Field trip.

340. Wildlife Biometry
Winter. 4(3-2) MTH 111, six credits in fisheries and wildlife. Survey of statistical formulas, methods and applications of statistics to problems in fisheries and wildlife.

374. Biological Oceanography
Winter. 3(3-0) B S 212 or approval of department. Biology of marine animals, with emphasis on physical, chemical and biological factors affecting their abundance and distribution.

376. Introductory Limnology
Winter. 3(3-0) B S 212, students may not receive credit for both FW 376 and FW 476. Lake and stream ecology including effects of natural and man-induced perturbations on freshwater ecosystems.

Environmental Conservation Education
Fall, Winter, Spring, Summer. 4(3-2) Education majors or approval of department. Nature, distribution and interrelationships of natural resources dictating the quality of man's environment. Principles of resource use, study of natural objects and techniques of teaching in and about the environment.

Fisheries and Wildlife Problems
Fall, Winter, Spring, Summer. 1 to 5 credits. May reenroll for a maximum of 12 credits. B S 212; 6 credits of fisheries and wildlife; approval of department. To give undergraduate majors an opportunity to study special topics in fisheries and wildlife.

Ecology of Animal Parasites
Summer. 6 credits. B S 212 or approval of department. Given at W. K. Kellogg Biological Station. Interdepartmental with the departments of Microbiology and Public Health and Zoology and administered by the Department of Microbiology and Public Health. Parasitism of animals by protozoa, helminths and arthropods with emphasis on the interrelationships of host-parasite associations with the natural environments.

Stream Ecology
Fall, Summer. given at W. K. Kellogg Biological Station. 3(3-0) ENF 240 or approval of department. Interdepartmental with and administered by the Department of Entomology. An in-depth examination of stream ecosystems--physical, chemical and biological aspects. Field work will be centered on local streams. Laboratory exercises will involve manipulations necessary for the determination of population energy budgets, with special emphasis on aquatic insects. Field trips required.

Wildlife Population Analyses
Spring. 4(3-2) B T 450 or ZOL 389, or concurrently. Population measurement, reproductive and survival rates, sex and age determination; handling and marking methods. Field trips.

Wildlife Habitat Analyses
Fall. 4(2-4) B T 450 or ZOL 389 or FOR 220. Evaluation of environmental factors affecting wildlife species, food and cover measurements. Determination of limiting factors.

Ecology of Migratory Birds
Fall. 4(2-4) ZOL 461 or approval of department. Ecological, behavioral and physiological characteristics affecting population parameters of migratory birds and applications of these relationships to the management of migratory wildlife resources.

Wildlife Biology and Management
Winter. 4(2-4) FW 434, ZOL 389 or FOR 280. Ecology and management of resident wildlife on farmland, forest and range lands.