

**Descriptions — Family Ecology  
of  
Courses**

- 819. Research Methods**  
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**  
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**  
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**  
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.
- 825. Methods of Teaching Adults**  
Spring of even-numbered years. 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. Supervision**  
Winter of odd-numbered years; Summer of even-numbered years. 3(3-0) Approval of department.  
Objectives, techniques, and organization of supervising teaching in teacher education programs.
- 827. Evaluation**  
Winter, 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, Summer. Variable credit. Approval of department.
- 831. Values and Family Behavior**  
Winter of even-numbered years. 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**  
Winter of odd-numbered years. 4(2-1) 331.  
Comparative study of conceptual frameworks of family decision-making and of interrelated decisions, including both individual and social choices.
- 835. Family As an Ecosystem**  
Fall. 3(3-0) Approval of department.  
Family viewed as an ecosystem. 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) 437, 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) 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 re-enroll 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.
- 841. Seminars in Home Economics Education**  
Spring, Summer. 2 or 3 credits. May re-enroll for a maximum of 9 credits. Approval of department.  
Seminars in selected topics.
- 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 re-enroll for a maximum of 9 credits. Approval of department.  
Study on an individual or group basis.
- 899. Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
- 901. Internship**  
Fall, Winter, Spring, Summer. 3 to 5 credits. May re-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 re-enroll for a maximum of 9 credits. Approval of department.  
Study on an individual basis.
- 903. Seminars in Family Ecology**  
Spring, Summer. 2 or 3 credits. May re-enroll for a maximum of 9 credits. Approval of department.  
Seminars in selected topics.
- 932. History and Philosophy of Human Ecology**  
(FCS 932.) 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 emphases.
- 999. Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

**FAMILY MEDICINE\* F M**

**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.
- 545. Principles of Family Medicine I**  
Spring. 3(3-0) Admission to medical school and approval of department.  
Clinical medicine which is specific in content for the practice of family medicine.
- 555. Principles of Family Medicine II**  
Summer. 4(4-0) Admission to medical school and approval of department.  
Continuation of 545.
- 620. Special Problems**  
Fall, Winter, Spring, Summer. 1 to 6 credits. May re-enroll for a maximum of 24 credits. Approval of department.  
Individual or group projects on special problems related to family medicine.
- 630. The Osteopathic Examination I**  
Winter. 1(0-2) Admission to medical school and approval of department.  
Instruction in the osteopathic examination.
- 632. Principles of Family Practice I**  
Winter. 1(0-4) Admission to medical school and approval of department.  
Placement of the student in a family physician's office or clinic.
- 640. The Osteopathic Examination II**  
Spring. 1(0-2) Admission to medical school and approval of department.  
Continuation of 630.
- 642. Principles of Family Practice II**  
Spring. 1(0-4) Admission to medical school and approval of department.  
Continuation of 632.
- 650. The Osteopathic Examination III**  
Summer. 1(0-2) Admission to medical school and approval of department.  
Continuation of 640.
- 652. Principles of Family Practice III**  
Summer. 1(0-4) Admission to medical school and approval of department.  
Continuation of 642.
- 660. The Osteopathic Examination IV**  
Fall, Winter. 1(0-2) Admission to medical school and approval of department.  
Continuation of 650.
- 662. Principles of Family Practice IV**  
Fall. 1(0-4) Admission to medical school and approval of department.  
Continuation of 652.
- 665. Principles of Family Medicine III**  
Fall. 4(4-0) Admission to medical school and approval of department.  
Continuation of 555.
- 670. The Osteopathic Examination V**  
Winter, Spring. 1(0-2) Admission to medical school and approval of department.  
Continuation of 660.

\*Established July 1, 1973. Formerly Department of Community and Family Medicine.

**672. Principles of Family Practice V**  
Winter. 1(0-4) Admission to medical school and approval of department.  
Continuation of 662.

**675. Principles of Family Medicine IV**  
Winter. 4(4-0) Admission to medical school and approval of department.  
Continuation of 665.

**680. The Osteopathic Examination VI**  
Spring. 1(0-2) Admission to medical school and approval of department.  
Continuation of 670.

**682. Principles of Family Practice VI**  
Spring. 1(0-4) Admission to medical school and approval of department.  
Continuation of 672.

**685. Principles of Family Medicine V**  
Spring. 4(4-0) Admission to medical school and approval of department.  
Continuation of 675.

**690. The Osteopathic Examination VII**  
Summer. 1(0-2) Admission to medical school and approval of department.  
Continuation of 680.

**692. Principles of Family Practice VII**  
Summer. 1(0-4) Admission to medical school and approval of department.  
Continuation of 682.

**695. Principles of Family Medicine VI**  
Summer. 4(4-0) Admission to medical school and approval of department.  
Continuation of 685.

**FAMILY PRACTICE\* FMP**

**College of Human Medicine**

**500. Preceptorship Training**  
Fall, Winter, Spring, Summer. 1 to 3 credits. One year of medical school. Interdepartmental with 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.

**FISHERIES AND WILDLIFE F W**

**College of Agriculture and Natural Resources**

**100. Introduction to Fisheries and Wildlife**  
Fall. 1(1-0)

Fisheries and wildlife as a profession. Academic and curricular needs to meet professional objectives, using current management problems as a focus for discussion.

**IDC. Resource Ecology and Man**  
For course description, see Interdisciplinary Courses.

\*Established July 1, 1974.

**202. Soils and Man's Environment**  
Winter. 3(3-0) Interdepartmental with Resource Development Department, Natural Resources, and Soil Science and administered by Soil Science.

Use of soil-water resources in a technological society as it relates to environmental quality. Nature of pollution problems and their possible solutions. Food production and world population.

**301. Fish and Wildlife of North America**  
Winter. 5(3-4) B 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.

**305. Principles of Fisheries and Wildlife Management**  
Spring. 3(3-0) IDC 200 or approval of department. Not open to majors in fisheries-limnology or wildlife-ecology options.

Ecological concepts in management. Effects of regulations, refuges, stocking, species introduction, habitat manipulation, artificial feeding, genetic improvement, land use and control of predators, diseases and competitors on the production of fish and game.

**328. Vertebrate Pest Control**  
Fall. 3(3-0) B S 212 or approval of department.

The role wild animals play as a damaging agent to man's interests; the concepts of damage and control; 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.

**402. 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.

**404. Fisheries and Wildlife Problems**  
Fall, Winter, Spring, Summer. 1 to 5 credits. May re-enroll 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.

**420. 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.

**424. Wildlife Population Analyses**  
Spring. 4(3-2) IDC 200 or approval of department.

Population mensuration; reproductive and survival rates; sex and age determination; handling and marking methods.

**425. Wildlife Habitat Analyses**  
Spring. 4(2-4) BOT 450 or ZOL 389 or FOR 220.

Evaluation of environmental factors affecting wildlife species; food and cover measurements. Determination of limiting factors.

**426. 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.

**427. Wildlife Biology and Management**  
Winter. 4(2-4) 424; ZOL 389 or BOT 450.

Ecology and management of resident wildlife on farm, forest and range lands.

**450. Natural Resource Administration**  
Fall, Spring. 4(4-0) Seniors. Interdepartmental with the departments of Forestry, Parks and Recreation Resources and Resource Development and Natural Resources. Administered by the Department of Forestry.

Concepts and methods of administering wildland properties. The legal, economic and social environment. Benefit-cost analysis of management changes. Unit organization, personnel management and accounting. Presents a systems view of administration.

**471. Ichthyology**  
Spring. 3(2-3) 301 or ZOL 305 or 314. Interdepartmental with Zoology Department.

Classification and natural history of fishes. Emphasis on food, game, and forage fishes.

**473. Fishery Biology and Management**  
Fall. 5(3-3) ZOL 471.

Biology of fishes with special reference to distribution and natural history, and application of this knowledge to problems of obtaining maximum return from fishery resources.

**475. Fish Culture**  
Spring. 3(3-0) 473.

Artificial propagation of freshwater fish including hatchery management, nutritional and environmental requirements, disease and parasite control and intensive fishery management. Utilization of hatchery stock in fisheries management.

**476. Limnology**  
Winter. 3(3-0) B S 212. Interdepartmental with the Zoology Department.

Ecology of lakes and streams with special reference to physical, chemical, and biological factors affecting their productivity.

**477. Limnological Methods**  
Winter. 3(0-9) 476 concurrently; ZOL 481; ENT 301, 302 recommended. Interdepartmental with the Zoology Department.

Methods and instruments of limnological field investigation on lakes and streams.

**484. Outdoor Environmental Education**  
Fall. 4(3-2) Juniors or approval of department.

Using the outdoors as a teaching laboratory for ecological studies of plant and animal communities. Designed primarily for secondary teachers.