

**Descriptions — Entomology
of
Courses**

820. Insect Ecology
Fall of even-numbered years. 3(2-3)
Approval of department.
Detailed consideration of the dynamics of insect populations. Review of those factors in the insect ecosystem which can be manipulated for the purpose of pest management. Role and use of models in insect ecology.

821. Advanced Stream Ecology
Summer. 3 credits. 421 or approval of instructor. Given at W. K. Kellogg Biological Station. Interdepartmental with the Department of Fisheries and Wildlife.
Stream ecosystem energy budget models with emphasis on individual projects involving both laboratory and field experiments. Particular use will be made of artificial streams and locally abundant species of aquatic insects.

838. Principles of Taxonomy
Spring of odd-numbered years. 3(3-0)
Twenty credits in zoology and/or entomology, or 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.

840. Insect Toxicology
Winter of odd-numbered years. 5(3-6)
301, 302; organic chemistry.
Chemical and physical properties of insecticides, relationship of chemical structure to mode of action, and physiological basis of toxicological action.

851. Insect Physiology Laboratory
Spring. 2(0-6) 450 or concurrently.
Selected physiological systems in insects.

871. Biology of Nematodes
Spring. 4(2-6) 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-parasitic and phytopathogenic species.

881. Biology of the Arthropoda
Winter. 5(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.

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.

364B. Interacting With Young Children — Laboratory
Fall, Winter, Spring. 1(0-3) 262A, 262B; 364A or concurrently.
Experience in interaction with children ages two to six years, individually and in small groups in a child development center.

369A. Learning Activities for Early Childhood Programs
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
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 244 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 7 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.

**FAMILY AND CHILD
SCIENCES**

FCS

College of Human Ecology

145. The Individual, Marriage and the Family
Fall, Winter, Spring. 4(4-0) 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
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.

262A. Child Growth and Development: Conception Through Early Childhood
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
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.

364A. Interacting With Young Children in Child Development Centers
(364.) Fall, Winter, Spring. 3(3-0) 262A, 262B.
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.

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. Credit may not be earned in both FCS 465 and PSY 290.

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(4-0) 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.

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

Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 12 credits. Approval of department.

801B. Seminar in Child Development

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.

831. Death, Dying, and the Family

Spring. 3(3-0)

Provides students with an understanding of various theoretical frames 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, Winter, Spring. Variable credit. 3(3-0) to 6(6-0) 262A or a child growth and development course.

In-depth analysis of a selected topic pertinent to the care and education of young children in child development centers.

841. Early Childhood Education: Curricular Approaches

Spring. 3(3-0) 262A or a child growth and development course.

Exploration of theoretical background and content of curricular approaches in early childhood programs. Analysis and evaluation of early childhood curricular materials. Experience in designing and sequencing activities for young children.

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.

850. Aging in the Family

Fall. 3(3-0) 480 or approval of instructor.

Provides students with a knowledge and understanding of the literature in aging in the family and develops an appreciation of the interrelationships involved in this multidisciplinary area.

862. Theories of Child Development

Fall. 3(3-0) 262A or child psychology.

Comparative study of conceptual frameworks utilized in child development.

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

221. The Role of the Helping Professions and Organizations in Community Services

(IDC 221.) Fall, Winter, Spring. 4(4-0) 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. 3(3-0)

Strategies, techniques and resource materials useful in improved management of personal finances. Special emphasis on stretching meager resources.

332. Theory and Application of Home Management

Fall, Winter, Spring. 4(3-2) Juniors and 331 or concurrently; or approval of department.

Principles of effective home management and their application in a living situation.

340. Instruction in Human Ecology for Non-Formal Settings

Fall, Winter, Spring. 3(2-2) Juniors, HEC 301; Dietetic Majors: HNF 320 or concurrently.

Theory and practice of instruction in Human Ecology with specific application to non-formal environments. For majors in Dietetics and Community Services and other majors in human ecology.