

**Descriptions – Park and Recreation Resources
of
Courses**

452. Sky Interpretation
Spring 3(2-2) PRR 351 or approval of department.

Observations of celestial objects and phenomena; past and present concepts of the sky; and procedures and materials for interpreting the sky.

455. Natural Resource Economics
Fall. 4(4-0) Approval of department. Interdepartmental with Agriculture and Natural Resources and the departments of Fisheries and Wildlife, Forestry, and Resource Development. Administered by the Department of Forestry.

Basic economic and political principles and techniques that govern the production and consumption of forest land products, including basic forest valuation procedures.

467. Principles of Therapeutic Recreation
(HPR 447.) Winter. 3(3-0) PRR 362.

Basic principles and procedures related to the planning, conducting and evaluation of Therapeutic Recreation services. Activity analysis, assessment and treatment plans are presented in depth.

468. Techniques in Therapeutic Recreation
(HPR 448.) Spring. 3(2-2) PRR 467.

Presentation of a variety of instructional, intervention and interaction techniques used when working with special populations in recreation.

469. Professional Issues and Trends in Therapeutic Recreation
(HPR 449.) Winter. 2(2-0) PRR 468.

Concepts of professionalism including current trends and issues, ethical and organizational considerations. Interpretation of the field and procedures of employment will be covered.

470. Commercial Recreation Enterprises
Fall. 4(4-0) EC 201; AFA 202 or approval of department.

The planning, design, impact, and natural resource base of privately-owned outdoor recreation businesses.

471. Recreation Products Consumption
Winter. 4(4-0) PRR 470 recommended; EC 201, AFA 202, or approval of department.

Recreation, economic and personality theories of consumption. Specific recreation product industry case studies.

480. Supervised Study
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 10 credits. Approval of department.

Seminars on current problems. Supervised readings. Individual undergraduate research on selected topics.

484. Senior Proseminar
Winter. 1(1-0) Senior majors.

Seminars on current professional problems and literature.

495. Recreation Management Practicum
(HPR 495.) Fall, Winter, Spring, Summer. 12(1-34) to 18(1-52) Senior recreation major and approval of department. Prerequisite courses dependent upon recreation emphasis.

Application of academic experiences to a professional recreation setting through an extended period of placement. Incorporating leadership, planning, organization, and evaluation of programs within the professional recreation setting.

801. Dimensions of Recreation and Leisure
Fall. 3(3-0) PRR 344 or approval of department.

Concepts of recreation and leisure in the United States and their implications for professional development. Extensive reading into concepts, definitions, values, educational components and historic roots of recreation and leisure.

840. Recreation Economics
Spring. 4(4-0) FOR 809 or approval of instructor. Interdepartmental with the departments of Forestry and Resource Development.

Application of economic analysis to recreation resource problems including measurement of demand and supply, valuation of recreation resources, determination of economic impact, economic decision making and policy considerations.

842. Park and Recreation Policy
Winter. 3(3-0) Interdepartmental with the Department of Resource Development.

Recreation, leisure and work concepts. Determination of needs for recreation facilities. Factors affecting public and private allocation of resources for provision of needed facilities.

844. Recreation Research Methods
Winter. 4(4-0) Approval of department.

Relate recreation research to broader context of social scientific investigation and to the nature and philosophy of social scientific research. Examine the theoretical and methodological approaches in recreation research.

846. Urban and Regional Recreation Resource Planning
Fall. 4(4-0) Approval of department.

Evaluation and application of recreation planning techniques at urban and regional levels. Analysis of programs, policies, land areas, facilities, and populations as they pertain to leisure service delivery systems.

848. Recreation Resource Law
Spring. 3(3-0)

Legal basis for public recreation. Methods of acquiring recreational resources, including contracts and condemnation procedures. Administrative problems, including zoning, liability, civil rights and law enforcement. Study of cases and statutes.

850. Development of Water Recreation Resources
Winter. 3(3-0) Approval of department.

Administration, research, design, and construction of water recreation facilities. Policy issues, use conflict, and fiscal planning reviewed in light of interagency relationship and legislative mandate.

871. Selected Topics
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.

Selected topics in recreation resource planning, administration, management, policy, and research.

880. Special Problems
Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 10 credits. Approval of department.

Advanced work for non-thesis projects or advanced individual study in recreation: policy, land use, planning, systems administration and management, economics, recreation forestry, commercial recreation enterprises, recreation and social problems, environmental interpretation, travel and touring, spatial analysis, leisure concepts, research.

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

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 36 credits. Approval of department.

PATHOLOGY PTH

**College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine**

404. General Pathology
Fall, Spring. 5(3-6) ANT 420, Junior Medical Technology majors, or approval of department.

407. Clinical Pathology
Winter, Summer. 3(3-0) or 5(3-4) Approval of department.
Theory and technics in hematology and coagulation.

408. Clinical Pathology
Fall, Spring. 3(3-0) or 5(3-4) Approval of department.
Immunohematology, urinalysis, and topics in blood chemistry.

502. Human Pathology I
Winter. 2 to 5 credits. Admission to a college of medicine or approval of department. ANT 560 for College of Osteopathic Medicine students.

Pathologic processes and specific disease syndromes with emphasis on clinical applications. Concepts of disease and pathologic process in selected common diseases or conditions for the beginning medical student with a limited knowledge of anatomy, physiology and biochemistry.

503. Human Pathology II
Spring. 3(3-0) PTH 502.

An introductory study of neuropathology in which vocabulary and concepts of neuromuscular diseases are systematically reviewed. Self-instructional option available.

504. Human Pathology III
Fall. 3(2-2) PTH 503 or approval of department.

A continuation of PTH 503. Diseases of the cardiovascular system, including stress effects, arteriosclerosis and disorders of autonomic and endocrine regulation. Laboratory sessions include the study of histologic sections.

505. Human Pathology IV
Winter. 3(2-2) PTH 504 or approval of department.

A continuation of PTH 504. The systems include: lung, kidney, male genitourinary and bone and joints. In the laboratory sections, gross and microscopic changes in diseased tissues are studied and correlated with lecture material. Separate lab sessions covering pulmonary function tests, acid-base balance and urinalysis are included.

506. Human Pathology V
Spring. 3(2-2) PTH 505 or approval of department.

A continuation of PTH 505. The systems include gastrointestinal tract (including liver and pancreas), female reproductive tract and breast.

520. Biology of Blood Diseases Laboratory
Spring. 1(0-3) Enrollment in a college of medicine or a graduate program in a biological science; MED 520 concurrently. Laboratory experience correlating basic science and clinical concepts of hematology.

550. Veterinary Pathology
Spring. 5(3-4) Third-term Veterinary Medicine students or approval of department. Principles of pathology, including causes of disease, disturbances of cell growth and metabolism, necrosis, circulatory changes, inflammation and neoplasia.

552. Veterinary Clinical Pathology
Winter. 4(3-3) Fifth-term Veterinary Medicine students or approval of department. Technical aspects, principles and interpretation of selected laboratory procedures in hematology, chemistry, cytology and related areas.

608. Pathology Clerkship
Fall, Winter, Spring, Summer. 3 to 17 credits. May reenroll for a maximum of 17 credits. Grade P in all courses offered in terms 1 through 8. Anatomic and clinical pathology, with emphasis on clinical-pathological correlations. Conducted in the pathology departments of affiliated hospitals.

609. Laboratory Medicine Clerkship
Fall, Winter, Spring, Summer. 6 credits. May reenroll for a maximum of 12 credits. Grade P in all courses in terms 1 through 8. Current laboratory procedures. Correlation of data from patients with clinical disease, to morphologic abnormalities and altered pathophysiology.

621. Histopathology Clerkship
Winter. 4 credits. Satisfactory completion of term 8 of the professional veterinary curriculum, approval of department. Supervised instruction in the examination and interpretation of histologic lesions caused by animal diseases.

651. Veterinary Clinical Pathology Clerkship
Fall, Summer. 4 credits. Satisfactory completion of term 8 of the professional veterinary curriculum, approval of department. Concepts in laboratory interpretation and diagnosis.

652. Veterinary Necropsy Clerkship
Fall, Winter, Spring, Summer. 4 credits. Satisfactory completion of term 8 of the professional veterinary curriculum, approval of department. Supervised necropsy and interpretation of findings.

656. Problems in Veterinary Necropsy
Fall, Winter, Spring, Summer. 4 credits. PTH 652, approval of department. Problems related to necropsy and interpretation of findings.

800. Problems in Pathology
Fall, Winter, Spring, Summer. Variable credit. Approval of department. Elective work for students in veterinary medicine interested in pathology as a speciality, or in the special pathology of diseases of a particular class or species, and for graduate minors and majors interested in pathological techniques or in non-thesis research.

801. Pathology Seminar
Fall, Winter, Spring, Summer. 1(1-0) May reenroll for a maximum of 3 credits for M.S. candidates and 6 credits for Ph.D. candidates. Approval of department. Seminar required of all majors in pathology.

802. Advanced Histopathology
Fall. 5(6-0) Approval of department. A relatively advanced and comprehensive study in the histopathologic aspects of systemic and special pathology; independent study in the field of pathogenesis and microscopic pathology.

803. Advanced Histopathology
Winter. 5(6-0) PTH 802 and approval of department. Continuation of PTH 802.

805. Pathology Proseminar
Fall. 2(2-0) Approval of department. Philosophy and methods of research; theses and other research reports; literature review; illustration of research data; practical assignments.

810. Postmortem Diagnosis
Fall, Spring. 3(0-9) May reenroll for a maximum of 6 credits. Approval of department. Required of majors. Instruction and practice in diagnosis of animal diseases by means of necropsy and other laboratory techniques. Emphasis will be placed upon correlation and interpretation of gross and microscopic lesions and results of other tests.

811. Advanced Clinical Pathology
Spring of even-numbered years. 3(1-6) Approval of department. Application of standard and newer techniques and instrumentations in hematology, biochemistry, parasitology, etc., to the diagnosis of disease.

812. Hematology
Winter. 5(3-4) PTH 408 or approval of department. Pathology of diseases of blood and an analysis of diagnostic laboratory procedures.

820. Oncology
Spring. 3(6-0) Approval of department. A study of benign and malignant neoplasms with emphasis on gross and microscopic characteristics and diagnosis.

826. Laboratory Animal Pathology
Winter of even-numbered years. 4(4-0) Medical degrees, approval of instructor. Macro and microscopic studies on the diseases of laboratory animals.

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

980. Histopathologic Diagnosis
Fall, Winter, Spring, Summer. 3(0-9) May reenroll for a maximum of 6 credits. PTH 803, PTH 820. Trimming, histopathologic examination, description, diagnosis and reporting of specimens from biopsy and necropsy.

990. Advanced Correlative Pathology
Fall, Winter, Spring, Summer. 5(0-15) May reenroll for a maximum of 15 credits. Approval of department. Experience in morphologic and clinical pathology and correlation of these with the clinical aspects of disease.

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

PEDIATRICS PED

(Established effective January 1, 1979.)
College of Osteopathic Medicine

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

600. Pediatrics Clerkship
(O M 652.) Fall, Winter, Spring, Summer. 6 or 8 credits. Grade P in all courses offered in terms 1 through 8 or approval of department. Practical clinical exposure in the area of pediatrics. Program developed to achieve proficiency in motor skills and aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management and therapy.

620. Directed Studies
Fall, Winter, Spring, Summer. 2 to 24 credits. PED 600 or approval of department. Study in general or specialty pediatrics.

PEDIATRICS AND HUMAN DEVELOPMENT PHD

(Name changed July 1, 1979. Formerly Department of Human Development.)
College of Human Medicine

520. Genetics Clinic
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 9 credits. Students will interview and examine patients with inheritable disorders, perform related laboratory diagnostic procedures, and participate in genetic counseling conferences and discussions.

531. Medical Genetics
Fall. 1(1-0) Admission to a college of medicine or approval of department. Basic genetic principles and their application to clinical medicine, prenatal genetic diagnosis, exercises in genetic counseling and the importance of relevant laboratory tests.

532. Phenomena of Development
Fall. 5(5-0) PHD 531 or approval of department. Normal psychological and physical development of the human including intellectual, social, emotional and endocrinological growth from infancy through adolescence. Clinical examples highlight deviations from the normal course of development.

590. Special Problems in Human Development
Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Human Medicine students or approval of department. Each student will work under direction of a staff member on an experimental, theoretical or applied problem.