Building Construction  B  C

200. Dynamics of American Housing  Fall, Winter, Spring, Summer. 3(3-0)
Impact of housing on the economic and social welfare of America. Analysis of the residential building industry and its problems in providing adequate housing.

312. Structural Design  Fall. 4(4-0) 200 or approval of department.
Consideration of structural design systems as used in light construction.

412. Housing Utilities Design  Winter. 4(4-0)
Design of and planning for mechanical and electrical utilities in housing.

413. Residential Construction Systems  Spring. 4(3-2) 312 or approval of department.
Analysis of the primary construction systems employed in the residential building industry, especially the economic and social aspects in meeting the housing goals of the U. S.

415. Building Materials  Spring. 4(4-0) 312 or approval of department.
Properties of building materials pertinent to their application and performance in service.

Methods of cost estimating. Effects of codes and production practices on costs.

417. Residential Finance  Winter. 4(4-0) Juniors.
Analysis of financial programs for the construction, rehabilitation, remodeling and purchase of homes; especially meeting the nation’s goals for low to moderate income housing.

418. Special Topics  Fall, Winter, Spring, Summer. 1 to 3 credits. Approval of department.
Selected topics in housing.

420. Construction Management  Spring. 4(2-2) 416 or approval of department.
Systems management techniques for residential building organizations inclusive of organization development, open shop, planning, scheduling and control, and administrative systems and procedures.

535. Research in Building Construction  Fall, Winter, Spring, Summer.
Variable credit. Approval of department.

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

PARK AND RECREATION RESOURCES  PRR

College of Agriculture and Natural Resources

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

300. Wilderness Survival  Fall, Winter, Spring, Summer. 4(3-0)
Outdoor skills for utilization of plant and animal materials to provide shelter, fire, signals, water and food in the outdoors. Psychology and attitudes conducive to wilderness survival and appreciation. Field trip required.

301. Wilderness Survival (TV)  Fall, Winter, Spring, Summer. 3(3-0)
Credit may not be earned in both 300 and 301. A television lecture course dealing with the principles and attitudes necessary to promote survival in a wilderness setting.

302. Environmental Attitudes and Concepts  Fall. 3(3-0)

304. Designs for Recreation: Nature and Man  Fall.  Spring. 3(3-0) Approval of department.
Design strategies are used to demonstrate relationships between characteristics of the environment and man’s use of it. Integration of work, leisure, and recreation uses within environmental potentials and limits is emphasized.

344. Leisure and Recreation Resources  Fall, Spring. 3(3-0)
Leisure in relation to park and recreation resources, history and philosophy, significance in modern society, and impact on urban and natural resource developments.

351. Environmental Interpretation I: Principles  Fall, Winter. 3(3-0)
Philosophy, needs, types, and uses of information services in private, municipal, county, state, and federal park and recreation areas. The role of the park interpreter (naturalist).

440. Park and Recreation Administration  Fall, Winter. 4(4-0)
Park and recreation organization, administration and policy at municipal, county, and regional level. Field trip required.

442. State and Federal Recreation Resource Policy  Winter. 3(3-0)
Origin, development and significance of public policy in recreation resource development in the United States with emphasis at state and federal levels. Field trip required.

444. Park and Recreation Area Design  Fall, Winter, Spring. 5(2-4) 304; HRT 211 or 212, or BOT 318; approval of department.
Planning and design principles of space, scale, and circulation applied to the use of park and recreation areas and facilities. Field trip required.

446. Park Area Operations  Spring. 3(3-0) Approval of department.
Problems in operations and maintenance of park and recreation areas and facilities. Personnel practices, budgeting, and maintenance schedules. Selection and adaptability of maintenance equipment. Field trip required.

448. Field Studies in Park Administration  Fall. 3 credits. Approval of department.
Investigation and analysis of outstanding park and recreation programs. Visits to areas under local, state, and federal jurisdiction. Evaluation of administrative practices, area management, and operation policies. Conducted as a traveling class with agency assistance.

449. Recreation Land Management  Winter. 3(3-0) Not open to majors.

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

451. Environmental Interpretation II: Methods and Devices  Spring. 4(3-2) 351
Methodology and equipment used in information transmission in natural, historic, and scenic areas. Site selection and development criteria for natural resource interpretation.

455. Natural Resource Economics  Winter. 4(4-0) 450 or approval of department. Interdepartmental with the departments of Fisheries and Wildlife, Forestry, Resource Development and Natural Resources. 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.

480. Supervised Study  Fall, Winter, Spring, Summer. 1 to 4 credits. May re-enroll 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.

801. Dimensions of Recreation and Leisure  Winter. 3(3-0) 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.
Applications 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
Fall. 4(4-0) SOC 315 or approval of department. Analysis of urban public, private and commercial recreation areas, facilities, and programs. Construction of a typology of urban communities. Course is conducted in selected urban communities in Michigan.

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
Spring. 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.

862. Recreation Research Seminar
Fall. 2(2-0) May re-enroll for a maximum of 4 credits. Approval of department. Evaluation of a variety of studies presented by the students to illustrate how principles are applied to recreation research project management.

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

PATHOLOGY

PHT

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

404. General Pathology
Fall. 5(3-6) ANT 450, Junior Medical Technology majors, or approval of department.

407. Clinical Pathology
Winter, Spring, 3 or 5 credits. 404 or approval of department. Theory and techniques in hematology, coagulation, blood microscopy, clinical chemistry and chemical pathology, including urinalysis, blood chemistry and continuous flow analysis.

408. Clinical Pathology
Winter, Spring, 3 or 5 credits. 404 or approval of department. Continuation of 407.

502. Human Pathology I
Winter. 2(2-0) Second term medical students or approval of department. 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. 2(2-1) 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) 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 secretion. Laboratory sessions include the study of histologic sections.

505. Human Pathology IV
Winter. 3(2-2) 504 or approval of department. A continuation of 504. The systems include: long, 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) 505 or approval of department. A continuation of PTH 505. The systems include gastrointestinal tract (including liver and pancreas), female reproductive tract and breast.

550. Veterinary Pathology I
Spring. 6(3-6) Admission to the professional veterinary program, or approval of department. Principles of pathology, including causes of disease, disturbances of cell growth and metabolism, necrosis, circulatory changes, inflammation and neoplasms; introduction to clinical hematology.

608. Pathology Clerkship
Fall, Winter, Spring, Summer. 3 to 17 credits. May re-enroll for a maximum of 17 credits. 406 or approval of department. Anatomical and clinical pathology, with emphasis on clinical-pathological correlations. Conducted in the pathology departments of affiliated hospitals.

650. Applied Veterinary Pathology
Fall, Winter, Spring, Summer. 5(4-12) Completion of eighth term of professional veterinary medicine curriculum. Instruction, demonstration and practice in laboratory diagnosis of animal diseases, using the techniques of necropsy and clinical pathology and correlating the results with those of microbiology, toxicology and histopathology.

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