533. Comprehensive Patient Evaluation IV

Spring. 2 to 6 credits. 532.

Interdepartmental course in physical examination skills. Stresses comprehensive, osteopathic evaluation of the patient. Includes preceptorship and appropriate systems biology clinical experiences.

534. Comprehensive Patient Evaluation and Management I

Summer. 2 to 6 credits. 533.

Interdepartmental course in physical examination skills, diagnosis and patient management. Stresses comprehensive, osteopathic evaluation and management of the patient. Includes preceptor assignment and appropriate systems biology clinical experiences.

535. Comprehensive Patient Evaluation and Management II

Fall. 2 to 6 credits. 533.

Continuation of 534.

536. Comprehensive Patient Evaluation and Management III

Winter. 2 to 6 credits. 533.

Continuation of 535.

537. Comprehensive Patient Evaluation and Management IV

Spring. 2 to 6 credits. 533.

Continuation of 536.

551. Systems Biology

(O M 550.) Fall. 3 to 12 credits. Admission to a college of medicine or approval of instructor.

A multidisciplinary approach to the hematopoietic systems providing a functional integration of basic science and clinical information.

552. Systems Biology II

Spring. 3 to 6 credits. Admission to a professional medical program.

A multidisciplinary approach to the integumentary system providing a functional integration of basic science and clinical information.

553. Systems Biology III

(O M 551.) Spring. 5 to 15 credits. Admission to a college of medicine or approval of college.

A multidisciplinary approach to the nervous system providing a functional integration of basic science and clinical information.

554. Systems Biology IV

(O M 552.) Fall. 5 to 15 credits. Admission to a professional medical program.

Continuation of 553 with emphasis on multidisciplinary approach to the cardiovascular system.

555. Systems Biology V

(O M 553.) Winter. 5 to 10 credits. Admission to a professional medical program.

Continuation of 554 with emphasis on multidisciplinary approach to the respiratory system.

556. Systems Biology VI

(O M 553.) Winter. 5 to 10 credits. Admission to a professional medical program.

Continuation of 555. This system will represent a multidisciplinary approach to the urinary system.

557. Systems Biology VII

(O M 554.) Spring. 5 to 15 credits. Admission to a professional medical program.

Continuation of 556 with emphasis on multidisciplinary approach to the gastrointestinal system and metabolism.

558. Systems Biology VIII

(O M 555.) Summer. 5 to 15 credits. Admission to a professional medical program.

Continuation of 557 with emphasis on multidisciplinary approach of the growth and development within (but not limited to) the field of pediatrics, obstetrics and gynecology.

590. Special Problems

Fall, Winter, Spring, Summer. 1 to 8 credits. May re-enroll 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.

610. The Osteopathic Examination I

(F M 630.) Fall. 1(0-4) Admission to a college of medicine or approval of instructor.

Instruction in the osteopathic examination.

611. The Osteopathic Examination II

(F M 640.) Winter. 1(0-4) 610 or approval of instructor.

Continuation of 610.

612. The Osteopathic Examination III

(F M 650.) Spring. 1(0-4) 611 or approval of instructor.

Continuation of 611.

613. The Osteopathic Examination IV

(F M 660.) Summer. 1(0-4) 612 or approval of instructor.

Continuation of 612.

614. The Osteopathic Examination V

(F M 670.) Winter. 1(0-4) 612 or approval of instructor.

Continuation of 613.

615. The Osteopathic Examination VI

(F M 680.) Winter. 1(0-4) 612 or approval of instructor.

Continuation of 614.

616. The Osteopathic Examination VII

(F M 690.) Spring. 1(0-4) 613, 614, 615 or approval of instructor.

Continuation of 615.

620. Systems Biology — Directed Studies

Fall, Winter, Spring, Summer. 1 to 15 credits. Admission to a professional medical program or approval of coordinator.

A directed study in systems biology for the continuing advanced student or remediation of any systems biology: hemopoietic, integumentary, nervous, cardiovascular, respiratory, urinary, gastrointestinal, growth and development.

PACKAGING PKG

College of Agriculture and Natural Resources

210. Principles of Packaging

Fall, Winter, Spring, Summer. 3(3-0)

A general course in packaging principles covering the growth and development of the field, and the technological and motivational problems involved in present day packaging. Consideration will be given to the basic functions of the package and their relation to the needs and wants of our society.

320. Packaging Materials

Fall, Spring. 4(4-0)

Common packaging materials including wood, paper, paperboard, plastics, metal foils and sheets, glass, adhesives, cushioning media; their basic properties in relation to performance of package.

330. Package Printing

Winter. 3(3-0) 320 or approval of school.

Basic printing processes used for packaging materials. Advantages, disadvantages and identification of these printing methods.

340. Packaging and the Environment

Winter. 4(4-0)

Broad study of the effects of packaging on environmental quality, including solid waste, air and water quality, laws, economics, energy considerations and resources conservation.

422. Packaging Systems

Fall, Winter. 4(4-0) 320 or approval of school.

Design, use and evaluation of packages and packaging systems. A one-day field trip is required.

423. Dynamics of Packaging

Spring. 4(3-3) 422 or approval of school.

A study of the protective function of the packaging systems in relation to their environment and shock and vibration isolation methods. A one-day field trip is required.

424. Packaging Problems

Fall, Winter, Spring, Summer. 1 to 3 credits. May re-enroll for a maximum of 9 credits. 422, 2.5 grade-point average and approval of school.

Development of solutions to specific packaging problems.

425. Packaging Process Analysis

Winter, Spring. 4(4-0) CPS 110.

The integrated study of the operation structure and control of the packaging and package-making process. A one-day field trip is required.

427. Packaging Materials and Systems Laboratory

Fall, Winter, Spring. 3(1-6) 320, 422 or approval of department.

Methods of measuring properties of packaging materials. Design, manufacture and performance testing of complete packages. Techniques for evaluating test results. Value of various test methods.

428. Packaging Development

Fall, Spring. 4(3-2) 422 or approval of school

A study of the functions of each area concerned with the development of packages to meet present-day requirements of protection and merchandising.

429. Packaging Economics

Winter. 3(3-0) 422, EC 200, AFA 201 or approval of department.

Examination of economic issues in packaging as they relate to policies of the firm and of government. Relationships between economic policy and social issues.

430. Packaging Machinery

Spring. 4(4-0) 422 or approval of school.

The components for automated packaging lines, and auxiliary materials handling equipment, including consideration of design, selection, specification and operation of machinery for the package-making and package-filling operations. One day field trip required.

463. Seminar

Fall. 2(0-4) Must have job experience to enroll.

Detailed report on work performed in practical experience or outside packaging projects.

801. Packaging Systems

Fall. 4(3-3)

Analysis of various existing packaging systems; problem solving exercises.

834. Special Investigations in Packaging

Fall, Winter, Spring, Summer. Variable credit.

899. Research

Fall, Winter, Spring, Summer. Variable credit. Approval of school.

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)

Beliefs and attitudes toward land by primitive man and ancient civilizations. Effects of Muir, Thoreau, and others on man/land relationships. Industrialism and environmental quality. Current environmental controversy. Field trip required.

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.

Fundamentals of outdoor recreation resource management. Planning, development, and administration of programs and facilities.

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.

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.

451. Environmental Interpretation II: Methods and Devices

Spring. 4(3-1) 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

Fall. 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.