

**Descriptions — Natural Science
of
Courses**

447. Pest Management: Systems Management for Plant Protection
(444.) Winter. 4(3-2) NSC 445, NSC 446 or approval of instructor. Interdepartmental with Agriculture and Natural Resources.

Designed to integrate knowledge and improve ability in arriving at pest management decisions of varying complexity involving the fields of agronomy, wildlife, horticulture, entomology, and plant pathology.

492. Integrative Studies
(U C 492.) Fall, Winter, Spring, Summer. 3 to 5 credits. Juniors.

In-depth study of topics which require an integration within or among the natural sciences or between the natural sciences and other major areas of human knowledge.

801. Special Problems in Electron Microscopy
Fall, Winter, Spring, Summer. 1 to 15 credits. Approval of instructor.

802. Essentials of Electron Microscopy
Fall, Winter. 2(2-0) Approval of instructor; NSC 810 or NSC 820 or NSC 830 concurrently.

Principles of electron microscopy including optical theory, instrument design and construction and selected specimen preparative procedures. Emphasis on current literature.

810. Methods in Transmission Electron Microscopy
Fall, Winter, Spring. 3(1-5) Approval of instructor; NSC 802 or concurrently.

Use of the transmission electron microscopes and preparative instruments. Preparative technique for biological and nonbiological materials. Photographic principles including interpretation of micrographs.

820. Methods in Scanning Electron Microscopy
Fall, Winter, Spring. 3(1-5) Approval of instructor; NSC 802 or concurrently.

Use of the scanning electron microscope and preparative equipment. Preparative technique for biological and nonbiological materials. Interpretation of micrographs.

830. Analytical Electron Microscopy
Fall, Spring. 2(1-3) Approval of instructor; NSC 802 or concurrently.

Use of X-ray analysis on electron microscopes and electron microprobes with biological and physical materials. Methods of preparation and analysis of product data.

**NURSING N E
(COLLEGE OF)**

200. Nursing I
Spring. 3(3-0) or 4(4-0) Approval of college.

Concepts and theories of nursing in relation to professional nursing practice. Role of nursing in contemporary society.

300. Nursing II
Fall. 10(7-9) N E 200, FCE 200, FCE 255, CEP 450.

Independent nursing role. Holistic approach to the healthy individual. Impact of developmental levels upon client health. Application of assessment component of nursing process in simulated and actual health care settings.

301. Nursing III
Winter. 10(6-12) N E 300.

Care of individuals at risk across the life span. Application of entire nursing process in a variety of health care settings.

302. Nursing IV
Spring. 10(5-15) N E 301, N E 441.

Application of the nursing process to individuals in diminished-stable health. Assessment of healthy families. Relation of research findings to practice. Clinical placement in acute care settings.

400. Nursing V
Fall. 10(5-15) N E 302, PSY 425.

Nursing of individuals in diminished-unstable and families in diminished-stable health states. Client referral and interdependent practice. Relation of research findings to practice. Clinical placement in acute care settings.

401. Nursing VI
Winter. 10(4-18) N E 400.

Nursing of individuals in depleted-compensated and families in diminished-unstable health states. Community assessment. Application of research findings to practice. Interdependent clinical practice within health care systems.

405. Nursing VII
Spring. 10(3-21) N E 401, N E 407.

Nursing of individuals and families with depleted health. Analysis of community health issues. Integration of theory and research from nursing and related sciences. Interdependent clinical practice within health care systems.

407. Introduction to Nursing Research
Fall. 2(2-0) N E 301, approval of college.

Lecture and independent activities are used to facilitate an understanding of the research process, terminology, and types of investigations undertaken in nursing. Findings relevant to practice are discussed.

440. Clinical Problems in Adaptation I
Fall. 5(5-0) ANT 316, PSL 240, PSL 241, MPH 234, PHM 350; approval of college.

Theoretical concepts necessary to understanding of individual's adaptive-maladaptive responses to stress. Emphasis on pathophysiology.

441. Clinical Problems in Adaptation II
Winter. 5(5-0) N E 440.

Emphasis placed upon individual's adaptive-maladaptive responses. Use of clinical case presentations.

490. Special Problems in Nursing
Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Approval of college.

Exploration of particular areas in nursing in greater depth and/or from a different perspective than possible within the limits of required courses.

490H. Honors Work
Fall, Winter, Spring, Summer. 1 to 12 credits. Honors College students or approval of college.

495. Selected Topics in Nursing
Fall, Winter, Spring, Summer. 2 to 6 credits. May reenroll for a maximum of 6 credits if different topic is taken. Approval of college. Allows exploration of unique issues in nursing. Topics to be selected from current issues.

521. Evaluation of Health Services
Spring. 2 to 4 credits. Approval of instructor. Interdepartmental with and administered by the Department of Community Health Science.

Use of experimental and quasi-experimental designs. Cost benefit and efficiency models. Assessment of health services delivery.

540. Family Health Seminar for the Clinical Nurse Specialist
Fall. 3(3-0) Majors or approval of instructor.

Conceptual frameworks of family. Assessment of family health behavior.

541. Facilitating Patient Participation
Winter. 2(2-0) N E 564 or approval of instructor.

Learning theories and methods to promote patient self care.

543. Health and Adaptation of the Elderly
Fall. 3(3-0) Baccalaureate degree in health science; approval of instructor. Interdepartmental with the Department of Community Health Science.

Health and adaptation of the aged individual experiencing the normative biophysiological and psychodevelopmental changes related to the aging process.

544. Aging, Environment, and Health: An Interactional Approach
Winter. 3(3-0) Baccalaureate degree in health science; approval of instructor.

Quality and quantity of interaction between the aged and their environment as an index of the health status of the older individual.

545. Human Sexuality for Health Professionals
Spring. 3(3-0) FCE 445 or approval of instructor.

Focus on physiological and psychosocial components of sexual functioning, clinical assessment and diagnosis of common sexual problems and primary care treatment.

564. Primary Care Seminar I: Role of the Clinical Nurse Specialist
Fall. 2(2-0) Approval of instructor.

Role of nurse in advanced practice. Dimensions of primary care within the health care system.

565. Primary Care Seminar II: Interdisciplinary Team Functioning
Winter. 2(2-0) Approval of instructor.

Theories of team functioning. Communication, consultation, collaboration, conflict and decision making. Role strategies.

566. Primary Care Seminar III: Organizational Structure
Fall. 3(3-0) N E 564, N E 565 or approval of instructor.

Organization of nursing in primary care.

567. Primary Care Seminar IV: Health Care Policy
Spring. 3(3-0) N E 564 or approval of instructor.

Policy influence on health care delivery systems.

570. Nursing Theories and Conceptual Models
Fall. 3(3-0) STT 421 or approval of instructor.

Issues, problems and processes of theory and concept development.

580A. Clinical Nurse Specialist Practicum I
(580.) Winter. 2(1-3) N E 564, approval of college.
Beginning skill development in physical assessment and interviewing, history taking.

580B. Clinical Nurse Specialist Practicum I
(580.) Spring. 3(1-6) N E 580A, approval of college.
Completion of physical examination and patient history, interpreting data. Health assessment of adult.

581. Clinical Nurse Specialist Practicum II
Fall. 5(2-9) N E 564, N E 565, N E 580B, CMS 521 or concurrently, approval of college.
Nursing management of clients in primary care. Focus on health maintenance, health promotion and self care. Single acute problems. Longitudinal study of a family.

582. Clinical Nurse Specialist Practicum III
Winter. 5(2-9) N E 581, approval of college.
Primary care management of clients with chronic health problems. Utilizes stress-adaptation framework. Longitudinal study of a family.

583. Clinical Nurse Specialist Practicum IV
Spring. 5(2-9) N E 582, approval of college.
Primary care management of clients with multiple health problems. Focus on loss theory. Longitudinal study of a family.

590. Special Problems
Fall, Winter, Spring. 1 to 6 credits.
May reenroll for a maximum of 12 credits. Approval of instructor.
Individual or group in-depth study of specific areas in nursing. Independent study.

595. Selected Topics
Fall, Winter, Spring. 2 to 6 credits.
May reenroll for a maximum of 6 credits if different topics are selected. Approval of instructor.
Selected issues, trends, programs or theories in nursing.

899. Master's Thesis Research
Fall, Winter, Spring. 1 to 6 credits.
May reenroll for a maximum of 15 credits. N E 570, approval of instructor.
Clinical research problem related to primary health care.

OBSTETRICS, GYNECOLOGY AND REPRODUCTIVE BIOLOGY OGR

College of Human Medicine

608. Obstetrics/Gynecology Clerkship
Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 43 credits. H M 602.
Experience with gynecologic and obstetrical patients, in in-patient and out-patient settings, under the direction of community practitioners and members of the MSU faculty.

609. Obstetrics and Gynecology Advanced Clerkship
Fall, Winter, Spring, Summer. 4 to 16 credits. May reenroll for a maximum of 16 credits. OGR 608, approval of department and approval of community coordinator.
Advanced clinical experience in gynecology and/or obstetrics.

610. Gynecology Ambulatory Clinic
Fall, Winter, Spring, Summer. 4 to 16 credits. May reenroll for a maximum of 16 credits. H M 602.
Contraception, management of abnormal Pap smear, pregnancy and abortion counseling, and general office gynecology.

OSTEOPATHIC MEDICINE O M

College of Osteopathic Medicine

590. Special Problems in Osteopathic Medicine
Fall, Winter, Spring, Summer. 1 to 8 credits. May reenroll 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.

620. Directed Studies
Fall, Winter, Spring, Summer. 2 to 24 credits. May reenroll for a maximum of 48 credits. Admission to a college of medicine or approval of department.
Individual or group work on special problems in medicine.

651. Obstetrics—Gynecology Clerkship
Fall, Winter, Spring, Summer. 12 credits. Grade P in all courses offered in terms 1 through 8.
Clinical exposure in obstetrics and gynecology. Program developed to achieve efficiency in obstetrical patient evaluation, management; motor skills, aptitudes; care of new born; evaluation of postpartum patient; management of gynecologic problems.

653. Surgery/Anesthesiology Clerkship
Fall, Winter, Spring, Summer. 12 credits. Grade P in all courses offered in terms 1 through 8.
Clinical exposure in area of surgical diagnosis, management, treatment. Program structure developed to achieve proficiency in motor skills, aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management, and therapy.

656. Orthopedics Clerkship
Fall, Winter, Spring, Summer. 6 credits. May reenroll for a maximum of 12 credits. Grade P in all courses offered in terms 1 through 8.
Clinical exposure in area of orthopedics. Program structure developed to achieve proficiency in motor skills, aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management, and therapy.

658. Otorhinolaryngology Clerkship
Fall, Winter, Spring, Summer. 6 credits. May reenroll for a maximum of 12 credits. Grade P in all courses offered in terms 1 through 8.
Clinical exposure in area of otorhinolaryngology. Program structure developed to achieve proficiency in motor skills, aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management, and therapy.

OSTEOPATHIC MEDICINE OST (COLLEGE OF)

500. Basic Concepts in Biomechanics
Fall. 2(2-0) Admission to a college of medicine or approval of department. Interdepartmental with the Department of Biomechanics.
Basic concepts of biomechanics and their relationship to functional anatomy and osteopathic manipulative therapy.

516. Medical Ethics
Winter. 3(3-0) Interdepartmental with and administered by the College of Human Medicine.
Analysis and evaluation of the ethical elements of medical decision making. Topics include: patient rights, physician responsibilities, euthanasia, informed consent, parentalism, confidentiality, biomedical research, and allocation of scarce resources.

520. Normal Endocrine Structure and Function
Spring. 3 credits. BCH 502.
An integrated basic science course presenting a series of lectures and laboratories related to the normal structure and function of the endocrine organs. Prerequisite for studying endocrine diseases in systems biology.

530. Comprehensive Patient Evaluation I
Fall. 2 to 6 credits. Admission to a college of medicine. ANT 565 or concurrently.
Interdepartmental course in physical examination skills. Stresses comprehensive, osteopathic evaluation of the patient.

531. Comprehensive Patient Evaluation II
Winter. 2 to 6 credits. OST 530, ANT 565.
Continuation of OST 530.

532. Comprehensive Patient Evaluation III
Spring. 4 credits. OST 531.
Interdepartmental course in physical examination skills. Stresses application of comprehensive, osteopathic evaluation of the patient. Introduction to office procedures and physical diagnosis.

533. Comprehensive Patient Evaluation IV
Fall. 2 to 6 credits. OST 532.
Interdepartmental course in physical examination skills. Stresses comprehensive, osteopathic evaluation of the patient. Includes preceptorship and appropriate systems biology clinical experiences.