444. **Pest Management I: Systems Management for Plant Protection**
(3-7) Fall, 4-3-2) FSM 200 or EC 201. Interdepartmental with Agriculture and Natural Resources.

Described 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.

445. **Pest Management II: Pesticide Chemistry and Application Systems for Plant Protection**
(4-5) Winter, 5-3-4) CEM 132. Interdepartmental with Agriculture and Natural Resources.

A broad overview of pesticide chemistry, efficient usage, environmental fate, legislation, and application techniques.

446. **Pest Management III: Biological Systems for Plant Protection**
(4-5) Spring, 3-3-0) ENT 430, BTO 405, HRT 402 or CSS 402. Interdepartmental with Agriculture and Natural Resources.

Management of plant pests utilizing host resistance, cultural practices, legislation, and biological systems.

460. **Clinical in Natural Science Teaching**
Fall, Winter, Spring, Summer. 1 credit. May reenroll for a maximum of 6 credits. Bachelor's degree.

Each practicum will deal with a specific science or science related problem and its implications for instruction. Discussions are intended to have immediate application by participants.

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

810. **Methods in Transmission Electron Microscopy**
Winter, Spring. 3(1-5) NSC 400 or approval of instructor.

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**
Winter, Spring. 3(1-5) NSC 400 or approval of instructor.

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

830. **Analytical Electron Microscopy**
Fall. 2(1-3) NSC 810 or NSC 820 or approval of instructor.

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

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**NURSING**

441. **Clinical Problems in Adaptation II**
Fall, Winter. 3(5-0) N E 440 and approval of school.

Continuation of N E 440.

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

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

495. **Selected Topics in Nursing**
Fall, Winter, Spring. 2 to 6 credits. May reenroll for a maximum of 6 credits if different topic is taken. Approval of school.

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 administrated by the Department of Community Health Science.


540. **Family Health Seminar**
(561.) Fall. 3(0-0) Majors or approval of instructor.

Conceptual frameworks of family. Assessment of family health behavior.

541. **Facilitating Patient Participation**
(552.) Winter. 2(2-0) N E 554 and approval of instructor.

Learning theories and methods to promote patient self care.

564. **Primary Care Seminar I: Role of Family Nurse Clinician**
(560.) Fall. 2(2-0) Approval of instructor.

Role of the Family Nurse Clinician in primary care.

565. **Primary Care Seminar II: Interdisciplinary Team Functioning**
(550.) 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**
(592.) Spring. 3(3-0) N E 564, N E 565 or approval of instructor.

Organization of primary care. Administration of the nursing service.

567. **Primary Care Seminar IV: Health Care Policy**
(565.) Summer. 3(3-0) N E 556 or approval of instructor.

Policy influence on health care delivery systems.

570. **Nursing Theories and Conceptual Models**
Fall. 3(3-0) STT 491 or approval of instructor.

Issues, problems and processes of theory and concept development.
580. Nursing Clinician Practicum I
Winter. 5(3-6) E 554, E 546, approval of school.
Beginning skill development in physical assessment, interviewing, history taking and health assessment of adult and child. Limited clinical experience with selected patients.

581. Nursing Clinician Practicum II
Spring. 5(2-9) E 580, approval of school.
Nursing management of clients in primary care.
Health maintenance and health promotion.

582. Nursing Clinician Practicum III
Summer. 5(2-9) E 581, approval of school.
Management skills for clients in diminished-usable and compensated-decompensated health states in primary care. Longitudinal study of a family.

583. Nursing Clinician Practicum IV
Fall. 5(2-9) E 582, approval of school.
Management skills for clients in depleted-decompensated and depleted-compensated health states in primary care. 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.

599. Master's Thesis Research
(599) Fall, Winter, Spring. 1 to 6 credits. May reenroll for a maximum of 12 credits. E 570, approval of instructor.
Clinical problem related to primary health care.

OSTEOPATHIC MEDICINE O M

College of Osteopathic Medicine

530. Clinical Science I
Fall. 2(1-3) Admission to a college of medicine.
Fundamental concepts and skills essential to the performance of a clinical history and physical examination.

531. Clinical Science II
Fall. 2(2-0)
Techniques, concepts and skills required for competent history taking and physical examination utilizing lectures, laboratory and films for instructional purposes.

532. Clinical Science III
Winter. 1(0-3) Admission to a college of medicine.
A clinical study program providing an opportunity to learn the skills of history-taking and physical examination by actual performance of the involved techniques on patients under physician supervision.

533. Clinical Science IV
Spring. 1(0-3) Admission to a college of medicine or approval of department.
Continuation of O M 532.

534. Clinical Science V
Summer. 1(0-3) Admission to a college of medicine.
A clinic-based program providing additional emphasis on history-taking and physical examination as well as developing fundamental abilities in diagnosis and problem solving in the clinic setting.

535. Clinical Science VI
Fall. 1(0-3) Admission to a college of medicine.
A continuation of O M 534.

536. Clinical Science VII
Winter. 1(0-3) Admission to a college of medicine.
Continuation of O M 535.

537. Clinical Science VIII
Spring. 1(0-3) Admission to a college of medicine.
Continuation of O M 536.

590. Special Problems in Osteopathic Medicine
Fall, Winter, Spring. 1 to 8 credits. May reenroll for a maximum of 12 credits. Approval of department.
Each student will work under direction of a faculty member on an experimental, theoretical or applied problem.

560. Clinical Science Practicum
Fall, Winter, Spring. 2 to 24 credits. May reenroll for a maximum of 45 credits. Admission to a college of medicine or approval of department.
Individual or group work on special problems in medicine.

565. Medicine Clerkship
Fall, Winter, Spring. 2 to 24 credits. May reenroll for a maximum of 24 credits. Grade P in all courses offered in terms 1 through 5 or approval of department.
Clinical exposure in obstetrics and gynecology. Program developed to achieve proficiency in motor skills and aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management, and therapy.

651. Obstetrics-Gynecology Clerkship
Fall, Winter, Spring. 12 credits. Grade P in all courses offered in terms 1 through 5 or approval of department.
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. 8 credits. Grade P in all courses offered in terms 1 through 5 or approval of department.
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.

654. Anesthesiology Clerkship
Fall, Winter, Spring. 4 credits. Grade P in all courses offered in terms 1 through 5 or approval of department.
Clinical exposure in area of anesthesiology. Program structure developed to achieve proficiency in motor skills, aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management, and therapy.