999  
Master's Thesis Research
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to master's students in the College of Natural Science. Approval of college. Master's thesis research.

901  
Frontiers in Biological Science
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Secondary certification in chemistry or physics or earth science or physical science or biology, 3 years teaching experience. Approval of college. Weekend workshops with research faculty exploring background and latest findings in their area of research.

902  
Frontiers in Physical Science
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to students with secondary teacher certification in chemistry or physics or earth science or physical science or biology and 3 years of teaching experience. Approval of college. Weekend workshops with research faculty exploring background and latest findings in their area of research.

620  
Directed Studies
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open only to juniors or seniors in the College of Osteopathic Medicine. Completion of Semester 6 in the graduate-professional program. Study in general or specialty neurology and ophthalmology.

656  
Neurology Clerkship
Fall, Spring, Summer. 2 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II. SA: PMR 856 Clinical exposure in neurology. Program structure developed to achieve proficiency in motor skills, aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management, and therapy.

835  
Topics and Methods in Neuroepidemiology
Summer of even years. 3(3-0) Interdepartmental with Epidemiology. Administered by Department of Epidemiology RB: (EPI 810) Epidemiology of neurologic conditions and discussion of the inherent difficulty in studying these disorders.

811  
Advanced Behavioral Neuroscience
Spring. 3(3-0) Interdepartmental with Psychology. Administered by Department of Psychology. RB: (PSY 411) approval of department. R: Open only to graduate students in the Psychology and Neuroscience major. Biological mechanisms involved in learning and memory, motivated behaviors, biological rhythms, and psychopathologies.

827  
Physiology and Pharmacology of Excitable Cells
Fall. 4(4-0) Interdepartmental with Pharmacology and Toxicology; Physiology; Zoology. Administered by Department of Pharmacology and Toxicology. RB: (PSL 451 or PSL 452 or BMB 461 or BMB 461 or ZOL 402) Function of neurons and muscle at the cellular level: membrane biophysics and potentials, synaptic transmission, sensory nervous system function.

890  
Independent Study in Neuroscience
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: Bachelor's degree in neuroscience, biology, psychology, or related area. Supervised student research on a specialized research topic in basic or clinical neuroscience.

999  
Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 120 credits in all enrollments for this course. Doctoral dissertation research.

NEUROLOGY AND OPTHALMOLOGY NOP

Department of Neurology and Ophthalmology
College of Human Medicine
College of Osteopathic Medicine

552  
Medical Neuroscience
Spring. 4(3-2) Interdepartmental with Physiology; Radiology; Human Anatomy. R: Graduate-professional students in the Colleges of Human Medicine and Osteopathic Medicine. SA: ANT 552 Correlation of normal structure and function of the human nervous system with clinical testing, classical lesions, and common diseases.

590  
Special Topics in Clinical Neuroscience
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Work under the direction of a faculty member on an experimental, theoretical or applied problem in clinical neuroscience or neurology.

617  
Neurology Clerkship
Fall, Spring, Summer. 2 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (MED 608) R: Open only to graduate-professional students in College of Human Medicine. SA: MED 617 Office and inpatient experience. Evaluation and management of neurological disease.

NEUROSCIENCE NEU

College of Natural Science

800  
Neuroscience Research Forum
Fall, Spring, Summer. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. RB: Bachelor's degree in neuroscience, biological or psychological science, or related area. Readings, presentations, and discussions of research literature in neuroscience. Professional development.

804  
Molecular and Developmental Neurobiology
Fall. 3(3-0) Interdepartmental with Pharmacology and Toxicology; Psychology; Pathology; Zoology. RB: Bachelor's degree in a Biological Science or Psychology. R: Open only to graduate students in the Neuroscience major. Nervous system specific gene transcription and translation. Maturation, degeneration, plasticity and repair in the nervous system.

806  
Advanced Neuroscience Techniques Laboratory
Summer. 3(0-9) Interdepartmental with Psychology; Pharmacology and Toxicology; Radiology; Physical Medicine and Rehabilitation. P.M: (NEU 804 or concurrently) RB: (PHM 827 and ANT 839 and PSY 811) R: Open only to doctoral students in the Neuroscience major. Methods of neuroscience research and the underlying principles on which these methods are based.

NURSING NUR

College of Nursing

202  
Introduction to Nursing Practice I
Fall. 2(1-3) R: Open only to students in the College of Nursing except students in PreNursing and Registered Nurses. Theoretical concepts of nursing necessary for professional practice. Assessment, interpersonal communication, documentation and decision-making.

204  
Introduction to Nursing Practice II

215  
Core Competencies in Nursing I
Fall, Spring. 1(1-0) R: Open only to students in the College of Nursing. Assessment core nursing competencies applying natural, social and nursing science.
303 Concepts of Nursing Care of the Adult Family Nursing Care for Adults at various levels of health and illness. Prototype health states with emphasis on associated nursing diagnosis and professional standards of care.

304 Practicum in Nursing Care of the Adult Fall, Spring. 4(0-12) P:M: (NUR 204 and NUR 341) C: NUR 304 concurrently. Nursing care of the adult client with an emphasis on health promotion, disease prevention, care in acute and chronic illness, and rehabilitation.

305 Concepts of Nursing Care of the Childbearing Family Fall, Spring. 2(2-0) P:M: (NUR 204 and NUR 341) C: NUR 306 concurrently. Concepts of holistic nursing care with culturally diverse childbearing families during the prenatal, intrapartum, and postpartum periods. Concepts of health promotion and risk factors in client care situations.

306 Practicum in Nursing Care of the Childbearing Family Fall, Spring. 3(0-9) P:M: (NUR 204 and NUR 341) C: NUR 305 concurrently. Practicum in nursing care with culturally diverse childbearing families during the prenatal, intrapartum and postpartum periods. Implementation of nursing process in various settings. Levels of risk reduction and health promotion.

307 Concepts of Nursing Care of Children and Their Families Fall, Spring. 3(0-9) P:M: (NUR 204 and NUR 341) C: NUR 308 concurrently. Theory and concepts related to the holistic care of children (infancy through adolescence) and their families.

308 Practicum in Nursing Care of Children and Their Families Fall, Spring. 3(0-9) P:M: (NUR 204 and NUR 341) C: NUR 307 concurrently. Clinical application of the theoretical concepts presented in NUR 307. Variety of health settings will be utilized for clinical practice.

314 Transition to Professional Nursing Fall, Spring. 4(3-3) R: Open only to Registered Nurses in the College of Nursing. Concepts and practicum for role transition for Registered Nurse seeking degree completion. Assessment, documentation, interpersonal skills and concepts of aging with emphasis on clinical decision making and socialization to professional role.

315 Core Competency in Nursing II Fall, Spring. 1(1-0) P:M: (NUR 215) R: Open only to students in the College of Nursing. Continuing assessment core of nursing competencies integrating natural, social, and nursing science.

319 Introduction to Nursing Theory and Research Spring. 3(3-0) P:M: (STT 200 or STT 201) and completion of Tier I writing requirement. R: Open only to students in the College of Nursing except students in PreNursing. Major nursing theories and their application to practice. The research process, terminology and investigations undertaken in nursing.

341 Clinical Problems in Adaptation Spring. 3(3-0) R: Open only to students in the College of Nursing except students in PreNursing. Theoretical concepts related to individual's adaptive-maladaptive responses to stress. Emphasis on pathophysiology.

409 Concepts of Psychiatric, Mental, and Community Health Nursing Fall, Spring. 4(4-0) P:M: Completion of Tier I writing requirement. R: Open only to students in the College of Nursing except students in PreNursing. Health care trends and issues in public and mental health. Role, responsibilities, and activities of nurses in the provision of care in public and mental health.

410 Practicum in Community Health Nursing Fall, Spring. 3(0-9) P:M: Completion of Tier I writing requirement. R: Open only to students in the College of Nursing except students in PreNursing. C: NUR 409 concurrently. Clinical experience in community health nursing focusing on application of public health and nursing principles in the care of individuals, families and aggregates in a variety of settings.

412 Practicum in Psychiatric and Mental Health Nursing Fall, Spring. 3(0-9) R: Open only to students in the College of Nursing except students in PreNursing. C: NUR 409 concurrently. Theoretical perspectives of behavior applied to mental health nursing in a practice setting. Advanced concepts of communication. Use of self, group and milieu are used to define the nurse's role.

413 Issues in Professional Nursing Fall, Spring. 2(2-0) P:M: Completion of Tier I writing requirement. R: Open only to students in the College of Nursing except students in PreNursing. Past, current, and future impact of selected legal, economic, educational, social, political, ethical, and professional forces on health care and nursing practice at local, national, and international levels.

415 Core Competencies in Nursing III Fall, Spring. 1(1-0) P:M: (NUR 315) R: Open only to students in the College of Nursing. Advanced assessment core of nursing competencies synthesizing natural, social, and nursing science.

416 Leadership and Management in Nursing Fall, Spring. 3(1-2) R: Open only to students in the College of Nursing. Not open to students with credit in NUR 420. Roles and responsibilities related to leadership and management in nursing practice. Impact of management theories and processes on nursing practice and the delivery of health care within organizations.

420 Senior Practicum in Nursing Fall, Spring. 4(1-9) R: Open only to students in the College of Nursing except students in PreNursing. Synthesis and application of nursing concepts as they relate to health care delivery in a variety of health care settings.

422 Nursing in Great Britain Summer. 5(5-0) Given only in London, England. R: Approval of College. Historical evolution of nursing in the National Health Service: British nursing education, hospital and community health nursing, standards of care, research, and management. Influence of professional nursing upon British national health policies.

430 Nursing Care of the Critically Ill Client Fall. 3(2-3) P:M: (NUR 304 and NUR 306 and NUR 308) Advanced medical-surgical nursing concepts. Preceptored practicum.

490 Independent Study in Nursing Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to students in the College of Nursing except students in PreNursing. Approval of college. Individualized area of study in Nursing.

491 Special Topics Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to students in the College of Nursing except students in PreNursing. Exploration of selected issues in nursing.

801 The Advanced Practice Nurse in Primary Care Fall. 2(2-0) R: Open only to master's students in the College of Nursing or approval of college. SA: NUR 501 The role of advanced practice nurses and the concept of primary care. Health care concepts related to the delivery of primary care services. Current health policies, legislative issues, and reimbursement mechanisms relevant to advanced practice nursing.

803 Conceptual Frameworks for Advanced Practice Nursing Fall. 3(3-0) R: Open only to master's students in the College of Nursing or approval of college. SA: NUR 505, NUR 513, NUR 521, NUR 511 Core conceptual and theoretical frameworks for advanced practice nursing in primary care. Basic philosophical tenets used to examine the applicability of those frameworks.

805 Pathophysiology for Advanced Practice Nursing Fall. 3(3-0) R: Open only to master's students in the College of Nursing or approval of college. SA: NUR 511 Alterations of various physiological systems. Pathophysiology of frequently encountered primary care conditions across the life span and special populations. In-depth case analysis of risk factors, pathophysiological changes, and associated clusters of signs and symptoms. Pathophysiological theories and research as a basis for advanced practice nursing.

807 Clinical Decision Making Spring. 3(2-3) P:M: (NUR 805) and (NUR 820 or NUR 830) R: Open only to master's students in the College of Nursing. Clinical decision making in advanced practice nursing. Decision theory and related concepts. Application of critical thinking and clinical judgment to differential diagnoses of common primary care conditions.
OBSTETRICS, GYNECOLOGY AND REPRODUCTIVE BIOLOGY

Department of Obstetrics, Gynecology and Reproductive Biology
College of Human Medicine

608 Obstetrics and Gynecology Required Clerkship
Fall, Spring, Summer. 6 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: (FMP 602) R: Open only to graduate-professional students in College of Human Medicine. Additional exposure to obstetrics or gynecology in the preceptor mode. Participation in ambulatory and inpatient care including surgery. May include maternal and fetal medicine.

609 Advanced Obstetrics and Gynecology Clerkship
Fall, Spring, Summer. 4 to 6 credits. RB: (OGR 608) R: Open only to graduate-professional students in College of Human Medicine. Additional exposure to obstetrics or gynecology in the preceptor mode. Participation in ambulatory and inpatient care including surgery. May include maternal and fetal medicine.

610 Perinatology Clerkship
Fall, Spring, Summer. 4 to 6 credits. RB: (OGR 608) R: Open only to graduate-professional students in College of Human Medicine. Additional exposure to high risk obstetrics including prenatal diagnosis and counseling, antepartum evaluation, and care of the high risk patient. Management of the intrapartum high risk patient.

611 Reproductive Endocrinology and Infertility Clerkship
Fall, Spring, Summer. 4 to 6 credits. RB: (OGR 608) R: Open only to graduate-professional students in College of Human Medicine. Added clinical experience in inpatient and ambulatory gynecologic oncology, breast disease, and complicated benign gynecology in the preceptor mode. Pre-treatment evaluation and cancer management, including surgery.

633 Extended Clinical Experience
Fall, Spring. Summer. 6(6-0) P:M: (OGR 608) Based in community hospitals and ambulatory sites, this is a 4 week clinical experience emphasizing interviewing skills, history, physical exam, problem solving and therapy.

637 Core Competencies III
Spring, Summer. 2 credits. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Human Medicine; Family Practice; Medicine; Pediatrics and Human Development; Surgery. Administered by Human Medicine. RB: (FMP 602) R: Open only to graduate-professional students in College of Human Medicine. A weekly seminar addressing core knowledge and skills from an interdisciplinary perspective.