

## Neurology and Ophthalmology—NOP

- 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.

## NEUROSCIENCE NEU

### Program in Neuroscience 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**  
Spring. 3(0-9) Interdepartmental with Psychology; Pharmacology and Toxicology; Radiology; Physical Medicine and Rehabilitation. RB: (PHM 827) R: Open only to doctoral students in the Neuroscience major.  
Methods and underlying principles of neuroscience research.
- 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.
- 820 Advanced Neuroanatomy**  
Summer of odd years. 1 to 5 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Interdepartmental with Human Anatomy. R: Approval of department.  
Current topics in anatomy and physiology processes of central nervous system cells.

- 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 431 or PSL 432 or BMB 401 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.

- 839 Systems Neuroscience**  
Spring. 4(4-0) Interdepartmental with Human Anatomy; Pharmacology and Toxicology; Physiology; Psychology; Zoology. R: Open only to graduate students in the Colleges of Human Medicine, Osteopathic Medicine, Agriculture and Natural Resources, Natural Science, Social Science, and Veterinary Medicine. SA: ANT 839  
Anatomy, pharmacology, and physiology of multicellular neural systems. Sensory, motor, autonomic, and chemo-regulatory systems in vertebrate brains.

- 885 Vertebrate Neural Systems**  
Spring of odd years. 3(2-2) Interdepartmental with Human Anatomy; Physiology. SA: ANT 885  
Comparative analysis of major component systems of vertebrate brains. Evolution, ontogeny, structure, and function in fish, amphibians, reptiles, birds and mammals.

- 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.

- 899 Master's Thesis Research**  
Fall, Spring, Summer. 1 to 36 credits. A student may earn a maximum of 99 credits in all enrollments for this course.  
Master's thesis research.

- 992 Advanced Topics in Neuroscience**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: (NEU 804 and NEU 811 and NEU 827 and ANT 839) Bachelor's degree in neuroscience, biology, psychology or related area.  
Readings, presentations and discussion of specialized topics in 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.

## NURSING

## NUR

### College of Nursing

- 110 Exploring Nursing**  
Fall, Spring. 2(2-0)  
Introduction to the bio-psycho-social conceptual model of persons in relation to nursing and health. Core concepts and theoretical foundations that frame the art and science of nursing. Development of the profession from inception into contemporary practice and its relationship to the U.S. healthcare system.
- 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**  
Spring. 4(2-6) P: (NUR 202 and PHM 350 or concurrently) C: PHM 350 concurrently.  
Nursing practice concepts in simulated and clinical practice settings. Development of nursing practice psychomotor skills.
- 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.
- 300 Pathophysiology**  
Fall, Spring. 4(4-0) P: (ANTR 350 and PSL 250) Not open to students with credit in NUR 341.  
Abnormal physiological health transitions over the lifespan. Disorders affecting cells, organs, and systems involved in the regulation of structure and function within the human organism. How diseases affect the structures, functions, and systems of the human organism. Influence of genetics, ethnicity, environment, and age.
- 303 Concepts of Nursing Care of the Adult**  
Fall, Spring. 4(4-0) P: (NUR 204 and NUR 341) C: NUR 304 concurrently.  
Family centered 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: (NUR 204 and NUR 341) C: NUR 303 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: (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: (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. 2(2-0) P: (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: (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.
- 313 Transition to Baccalaureate Nursing and Online Learning**  
Fall. 1(1-0) R: Open only to students in the RN tracking major.  
Issues, role and scope of baccalaureate nursing practice. Concepts of and applications in online learning.
- 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: (NUR 215) R: Open only to students in the College of Nursing.  
Continuing assessment core of nursing competencies integrating natural, social, and nursing science.
- 316 Health and Physical Assessment**  
Fall. 3(1-6) R: Open only to students in the RN tracking major.  
Health and physical assessment, documentation and interpersonal skills. Concepts of aging and cultural competence within the context of clinical decision-making.
- 319 Introduction to Nursing Theory and Research**  
Spring. 3(3-0) P: (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.
- 330 Health Assessment and Nursing Therapeutics**  
Fall, Spring. 7(3-10) P: (NUR 300) C: PHM 350 concurrently, NUR 350 concurrently, NUR 340 concurrently.  
Normal physiology and pathophysiology. Theories of growth and development across the life span. Therapeutic communication and physical, psychosocial, cultural and spiritual assessment techniques and mastery of basic nursing therapeutics. Understanding the significance of abnormal findings by system across the lifespan.
- 340 Foundations of Nursing Practice**  
Fall, Spring. 4(4-0) P: (NUR 300) and completion of Tier I writing requirement. C: PHM 350 concurrently, NUR 330 concurrently, NUR 350 concurrently.  
Theories and principles underlying professional nursing practice. Development of basic principles for using empirical evidence and the research process to guide practice.
- 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.
- 350 Level I Integrative Seminar**  
Fall, Spring. 1(2-0) P: (NUR 300) C: NUR 330 concurrently, NUR 340 concurrently, PHM 350 concurrently.  
Integration of concepts and theories into beginning level nursing practice. Examination of dynamic interrelationship between professional, scholarly nursing practice, and the health and wellness of diverse persons and populations across the life span.
- 360 Acute Nursing Care of Adults and Older Adults**  
Fall, Spring. 8(4-12) P: (NUR 350) C: NUR 370 concurrently, NUR 380 concurrently.  
Intensive theory course integrating foundational pharmacology, pathophysiology, and first level nursing courses. Addressing acute and chronic conditions in an acute care setting.
- 370 Mental Health and Psychiatric Nursing**  
Fall, Spring. 4(2-6) P: (NUR 350 and NUR 330 and NUR 340 and PHM 350) C: NUR 360 concurrently, NUR 380 concurrently.  
Extension of foundational social science concepts into nursing therapeutics aimed at mental health and the care of persons with mental illnesses. Medication and non-medication interventions, group interventions, and therapeutic environments.
- 380 Level II Integrative Seminar**  
Fall, Spring. 1(2-0) C: NUR 360 concurrently, NUR 370 concurrently.  
Extension of beginning level concepts and theories. Integration of these into advanced beginning level nursing practice. Dynamic interrelationship between professional, scholarly nursing practice, and health and wellness of diverse adults with medical-surgical and psychiatric illnesses.
- 400 Pharmacology for Nurses**  
Spring. 3(3-0) P: (NUR 313 and NUR 316 and NUR 341) R: Open only to students in the RN tracking major.  
Principles of nursing management in drug therapy, drug classifications and patient-related variables. Assessment and evaluation of patient responses in relation to health, age, lifestyle, gender, ethnicity and other cultural factors.
- 407 Concepts in Community Health Nursing**  
Summer. 2(2-0) P: (NUR 313 and NUR 316 and NUR 341 and NUR 400) R: Open only to students in the RN tracking major.  
Theoretical foundation for contemporary community and public health nursing practice.
- 409 Concepts of Psychiatric, Mental, and Community Health Nursing**  
Fall, Spring. 4(4-0) P: 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: 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: 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: (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: (NUR 304 and NUR 306 and NUR 308)  
Advanced medical-surgical nursing concepts. Preceptored practicum.

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- 435 Nursing Care of the Childbearing Family**  
Fall, Spring. 4(2-6) P: (NUR 360 and NUR 350 and NUR 380) C: NUR 440 concurrently, NUR 450 concurrently.  
Health promotion and risk assessment of individuals and families during pregnancy and birth. Therapeutic communication and assessment skills for providing holistic care to culturally diverse childbearing families during the prenatal, intrapartum, and postpartum periods. Caring for mother and baby in utero and after birth.
- 440 Nursing Care of Children, Adolescents and Their Families**  
Fall, Spring. 4(2-6) P: (NUR 360 and NUR 370 and NUR 380) C: NUR 435 concurrently, NUR 450 concurrently.  
Theoretical concepts and clinical application of nursing care of infants, children, and adolescents in varied health care and community settings. Synthesis of pathophysiologic, pharmacologic, and therapeutic concepts. Family-centered care of children within developmental, cultural, ethnic, religious, and social structures.
- 450 Level III Integrative Seminar**  
Fall, Spring. 1(2-0) P: (NUR 360 and NUR 370 and NUR 380) C: NUR 435 concurrently, NUR 440 concurrently.  
Extension of advanced beginning level concepts and theories. Integration of these into intermediate level nursing practice. Dynamic interrelationship between professional, scholarly nursing practice and health and wellness of diverse families, from childbearing through adolescence.
- 460 Leadership Clinical Immersion**  
Fall, Spring. 5(2-9) P: (NUR 435 and NUR 440 and NUR 450) and completion of Tier I writing requirement. C: NUR 470 concurrently, NUR 480 concurrently.  
Theories, principles, and practices of leadership, management, and nursing care delivery systems in a variety of agency settings. Application of theories and principles in a mentored practicum.
- 470 Community and Population Health Nursing**  
Fall, Spring. 4(2-6) P: (NUR 430 and NUR 440 and NUR 450) C: NUR 460 concurrently, NUR 480 concurrently.  
Theoretical and practicum basis for community-oriented population nursing practice. Promoting and protecting the health of the public using health promotion, risk reduction, and disease management and control strategies with vulnerable persons and populations. Community assessment, epidemiologic, environmental, change, political action, and case-management frameworks are used to guide evidence-based nursing care delivery to persons, families, and populations in community settings.
- 480 Role Transition Seminar**  
Fall, Spring. 2(4-0) P: (NUR 435 and NUR 440 and NUR 450) and completion of Tier I writing requirement. C: NUR 460 concurrently, NUR 470 concurrently.  
Capstone seminar integrating advanced level concepts and theories to prepare students for entry-level practice as a clinical nurse leader. Dynamic interrelationship between professional, scholarly nursing practice, and health and wellness of diverse populations and health care organizations.
- 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 Advanced Professional Role**  
Fall. 2(2-0) R: Open only to master's students in the College of Nursing. SA: NUR 501  
Exploration of the roles of the Master of Science in Nursing graduate in contemporary health care organizations. Cost and value of the MSN. Role in collaborate care and managed care. Evaluation of individual impact on quality of health care.
- 803 Conceptual and Theoretical Frameworks**  
Fall. 3(3-0) R: Open only to master's students in the College of Nursing or approval of college.  
Conceptual and theoretical frameworks and their applicability to advanced nursing practice, teaching, and research.
- 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.
- 809 Applied Pharmacology for Primary Care**  
Spring. 3(3-0) P:M: (NUR 805)  
Clinical application of advanced pharmacology and pharmacotherapeutics for common disease conditions encountered in primary care settings. Principles of altered pharmacodynamics relative to age, race, and ethnic groups. Cost/benefit aspects of pharmacological interventions.
- 810 Issues in Community-Based Care**  
Spring, Summer. 3(3-0) P:M: (NUR 801 and NUR 803)  
Conceptual basis for the analysis of health care issues. Health promotion, risk reduction, health disparities, evidence and population-based health care. Cultural competence and ethical issues related to health care within the context of primary care.
- 815 Research and Evaluation for Advanced Practice Nurses**  
Spring. 4 to 5 credits. R: Open only to master's degree students in the College of Nursing or approval of College. SA: NUR 811, NUR 813  
Principles of scientific research, including research design, measurement, sampling and analysis encountered in clinical literature and evaluation research.
- 820 Health Assessment of the Family**  
Fall. 2(0-6) R: Open only to master's students in the College of Nursing or approval of college. SA: NUR 500  
Collection of comprehensive subjective and objective data for practice as a family advanced practice nurse. Development of advanced health history and physical assessment skills across the lifespan. Interview, communication, and psychomotor skill development.
- 821 Primary Care Management of the Family I**  
Summer. 4(4-0) P:M: (NUR 801 and NUR 803 and NUR 807 and NUR 809 and NUR 815 and NUR 820) SA: NUR 522  
Principles and issues of health care management for family advanced practice nurses in primary care. Health promotion, disease prevention, and single acute problems of individuals across the life span and for diverse populations. Analysis of primary care practice topics using family frameworks and evidence based research.
- 822 Practicum I: Primary Care for the Family**  
Fall. 6(0-18) P:M: (NUR 815 and NUR 821) SA: NUR 522  
Integration of assessment and applied theory in primary care management of clients across the life span. Collaborative model of primary care practice. Health promotion, health maintenance management, and risk reduction strategies for individuals within the context of family. Single acute condition focus. Problem-oriented format for organizing client data.
- 823 Primary Care Management of the Family II**  
Fall. 3(3-0) P:M: (NUR 815 and NUR 821) SA: NUR 524  
Principles and issues of health care management for family advanced practice nurses in primary care. Health care management of clients across the life span with chronic, stable and/or multiple complex problems. Integration and synthesis of relevant frameworks.
- 824 Practicum II: Primary Care for the Family**  
Spring. 7(0-21) P:M: (NUR 822 and NUR 823) SA: NUR 524  
Integration of assessment and applied theory in primary care management of clients across the lifespan. Collaborative model of primary care practice. Health care management of chronic, stable and multiple complex problems of individuals within the context of family. Increasingly independent decision making with preceptor validation.
- 830 Health Assessment of Older Adults**  
Fall. 2(0-6) R: Open only to master's students in the College of Nursing or approval of college. SA: NUR 500  
Collection of comprehensive subjective and objective data for practice as a gerontological advanced practice nurse. Development of advanced health history and physical assessment skills of adults, focusing on older adults. Interview, communication, and psychomotor skill development.

- 831 Primary Care Management of Older Adults I**  
 Summer. 4(4-0) P:M: (NUR 801 and NUR 803 and NUR 807 and NUR 809 and NUR 815 and NUR 830) SA: NUR 532  
 Principles and issues of health care management for gerontological advanced practice nurses in primary care. Research based biological, pharmacological, and psychosocial factors and theories of aging. Health promotion. Evaluation, coordination, and treatment of infectious states. Care of chronic, stable conditions. Common age changes and social networks. Professional, legal, ethical, and political issues impacting the role of advanced practice nurses in primary care.
- 832 Practicum I: Primary Care for Older Adults**  
 Fall. 6(0-18) P:M: (NUR 815 and NUR 831) SA: NUR 532  
 Integration of assessment and applied theory in primary care management of older clients from a variety of ethnic and cultural groups. Collaborative model of primary care practice. Evaluation and treatment of infectious states. Care of chronic, stable conditions. Practice issues including ethical, legal, and political aspects of advanced practice nurses.
- 833 Primary Care Management of Older Adults II**  
 Fall. 3(3-0) P:M: (NUR 815 and NUR 831) SA: NUR 534  
 Principles and issues of health care management for gerontological advanced practice nurses in primary care. Management of the older client with complex health problems and functional losses. Research based biological, pharmacological, and psychosocial theories of aging. Coordination of care involving multiple health care agencies.
- 834 Practicum II: Primary Care for Older Adults**  
 Spring. 7(0-21) P:M: (NUR 832 and NUR 833) SA: NUR 534  
 Integration of assessment and applied theory in primary care management of older clients from a variety of ethnic and cultural groups. Health care management of clients with complex health problems and functional losses. Collaborative model of primary care practice. Development and evaluation of long term management plans. Coordinating care involving multiple agencies.
- 841 Health Care Policy in Perspective: Economics, Politics and Ethics**  
 Spring. 2(2-0) SA: NUR 503  
 Economic, political and regulatory environment of the U.S. health care system. Quality, costs, equity in access of services. Comparison of U.S. systems with those of other advanced industrial countries.
- 845 Women and Health in the United States: A Sociological and Nursing Perspective**  
 Spring. 3(3-0) R: Open only to seniors or graduate students. SA: NUR 541  
 Health status of contemporary women. Role of women as consumers and providers of health care. Health care delivery in the U.S.
- 850 Health Assessment of Adults**  
 Fall. 2(0-6) R: Open only to master's degree students in the College of Nursing or approval of college. Not open to students with credit in NUR 820.  
 Collection of comprehensive subjective and objective data for practice as an adult practice nurse. Development of advanced health history and physical assessment skills. Interview, communication, and psychomotor skill development.
- 851 Primary Care Management of the Adult I**  
 4(4-0) P:M: (NUR 801 and NUR 803 and NUR 807 and NUR 809 and NUR 815 and NUR 850)  
 Principles and issues of health care management for adult advanced practice nurses in primary care. Health promotion, disease prevention, and single acute problems of adults from diverse populations. Analysis of primary care practice topics using family frameworks and evidence based research.
- 852 Practicum I: Primary Care for the Adult**  
 Fall. 6(0-18) P:M: (NUR 851)  
 Integration of assessment and applied theory in primary care management of adult clients. Collaborative model of primary care practice. Health promotion, health maintenance management, and risk reduction strategies for individuals within the context of family. Single acute condition focus. Problem oriented format for organizing client data.
- 853 Primary Care Management of the Adult II**  
 Fall. 3(3-0) P:M: (NUR 852)  
 Principles and issues of health care management for adult advanced practice nurses in primary care. Health care management of adults with chronic, stable and/or multiple complex problems. Integration and synthesis of relevant frameworks.
- 854 Practicum For Primary Care Adult Advanced Practice Nurses II**  
 Spring. 7(0-21) P:M: (NUR 853) R: Open only to students in the Master of Science degree in Nursing.  
 Integration and application of assessment and relevant conceptual and theoretical frameworks in the primary care management of adults within the context of family using a "collaborative model" of primary care practice. Management of complex and stable chronic health problems. Independence in practice. Independent decision making with preceptor validation.
- 861 Curriculum Design in Nursing Education**  
 Spring. 3(3-0) P:M: (NUR 801)  
 Theories, standards and techniques to design, deliver and evaluate a curriculum and learner outcomes.
- 865 Nursing Education Seminar**  
 Spring. 2(2-0) R: Approval of college.  
 Syntheses of teaching and learning, curricular development, and learner-evaluation theories and strategies. Curricular design and unique characteristics of academic and clinical instruction and learning.
- 866 Academic Internship in Nursing Education**  
 Fall. 3(1-6) P:M: (NUR 861) R: Approval of college.  
 Development of theory-based curricula in an academic environment. Evaluation of teaching effectiveness and learner outcomes.
- 867 Clinical Internship in Nursing Education**  
 Spring. 4(1-9) P:M: (NUR 861) R: Approval of college.  
 Application and evaluation of teaching and learning principles in a diverse health care setting.
- 890 Special Problems**  
 Fall, Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open only to master's students in the College of Nursing or approval of college. SA: NUR 590  
 Individual or group in-depth study of specific areas in nursing. Independent study.
- 891 Selected Topics**  
 Fall, Spring. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to master's students in the College of Nursing or approval of college. SA: NUR 591  
 Selected issues, trends, programs, or theories in nursing.
- 899 Master's Thesis Research**  
 Fall, Spring. 1 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: (NUR 811) R: Open only to master's students in the College of Nursing. Approval of college.  
 Master's thesis research.
- 901 Knowledge Development in Nursing**  
 Fall. 3(3-0) R: Open only to doctoral students in the College of Nursing or approval of college.  
 Development and growth of substantive knowledge within nursing. Middle range theories. Strategies for concept development and theory testing in nursing research for understanding health status and health outcomes for individuals, families and community-based primary care.
- 910 Health Status Outcomes: The Individual and Family**  
 Spring. 3(3-0) R: Open to all doctoral students or approval of college  
 Measurement and conceptual underpinnings of health status outcomes for individuals and families across the life span. Focus on well-being in health and illness within community based primary care.
- 911 Health Status Outcomes: Community/Primary Care**  
 Fall. 3(3-0) R: Open to all doctoral students or approval of college.  
 Measurement of health status outcomes for populations across the life span within the community based primary care systems. Measurement and evaluation issues related to the costs of intervention to impact outcomes.
- 920 Translation of Research and Scientific Knowledge to a Community Setting**  
 Spring. 3(2-3) R: Open only to doctoral students in the College of Nursing or approval of college.  
 The systematic application of scientific knowledge to inform clinical practice, policy and delivery system changes to enhance the health status and health outcomes of community populations. Translation strategies include dissemination, networking, program development and evaluation. Opportunities for translation will occur in primary health care, organizational and governmental systems.
- 930 Methods In Clinical Research**  
 Spring. 3(2-3) R: Open to all doctoral students or approval of college.  
 Advanced research designs, measurement and data collection strategies. Draws on a broad range of behavioral and health disciplines relevant to nursing. Logic of statistical models used in the evaluation of research designs and measures.
- 940 Research Practicum**  
 Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to doctoral students in the College of Nursing or approval of college.  
 Practical experiences as a researcher through participation in ongoing research of nursing faculty and as a member of an interdisciplinary research team.

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- 990 Special Problems**  
Fall, Spring, Summer. 1 to 4 credits. R: Open only to doctoral students in Nursing or approval of college.  
Individual or group in-depth study of specific areas in nursing research.
- 999 Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. R: Open only to doctoral students in the College of Nursing or approval of college.  
Original research of student under supervision of major advisor.

## OBSTETRICS, OGR 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. RB: (FMP 602) R: Open only to graduate-professional students in College of Human Medicine.  
Obstetrics and gynecology in inpatient and ambulatory settings. Clinical experiences, didactic sessions, hospital rounds discussions. Case writeups and presentations.
- 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 exposure to clinical problems in reproductive endocrinology and female infertility primarily in ambulatory setting. Occasional participation in inpatient experiences. Assisted reproductive technologies.

- 612 Gynecologic Oncology 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) Fall: All six(6) campuses. Spring: All six(6) campuses. Summer: All six(6) campuses. 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**  
Fall, Spring, Summer. 2(2-0) Fall: same as below. Spring: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. Summer: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. 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 College of Human Medicine. R: Open only to graduate-professional students in College of Human Medicine.  
Core knowledge and skills from an interdisciplinary perspective.

## OSTEOPATHIC OMM MANIPULATIVE MEDICINE

### Department of Osteopathic Manipulative Medicine College of Osteopathic Medicine

- 501 Osteopathic Manipulative Medicine I**  
Fall. 1(0-2) R: Open only to students in the College of Osteopathic Medicine.  
Basic osteopathic palpatory skills leading to osteopathic diagnosis and treatment using counterstrain and muscle energy techniques.
- 502 Osteopathic Manipulative Medicine II**  
Spring. 1(0-2) P:M: (OMM 501) R: Open only to students in the College of Osteopathic Medicine.  
Muscle energy continued followed by osteopathic diagnosis and treatment using hi velocity low amplitude (mobilization with impulse) techniques.
- 503 Osteopathic Manipulative Medicine III**  
Summer. 1(0-2) P:M: (OMM 502) R: Open only to students in the College of Osteopathic Medicine.  
Osteopathic diagnosis and treatment using functional indirect and myofascial release techniques.
- 504 Osteopathic Manipulative Medicine IV**  
Fall. 1(0-2) P:M: (PHM 563 and RAD 553 and OST 511 and OMM 503) R: Open only to students in the College of Osteopathic Medicine.  
Osteopathic diagnosis and treatment using cranio-sacral techniques and various osteopathic manipulative approaches to the extremities.
- 505 Osteopathic Manipulative Medicine V**  
Spring. 1(0-2) P:M: (OMM 504) R: Open only to students in the College of Osteopathic Medicine.  
Application of osteopathic palpatory skills and treatment modalities in the approach to patients in various systems such as pulmonary and cardiovascular.
- 506 Osteopathic Manipulative Medicine VI**  
Summer. 1(0-2) P:M: (OMM 505) R: Open only to students in the College of Osteopathic Medicine.  
Continued integration of osteopathic manipulative treatment in patient care in preparation for clinical curriculum.
- 590 Special Problems in Biomechanics**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 48 credits in all enrollments for this course. R: Open only to graduate and graduate-professional students in the College of Osteopathic Medicine. Approval of department. SA: BIM 590  
Each student works under faculty direction on an experimental, theoretical, or applied problem.
- 601 Osteopathic Manipulative Medicine Clerkship**  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 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: BIM 601, BIM 601  
Advanced training in the diagnosis of musculoskeletal dysfunction and application of osteopathic manipulative techniques.
- 620 Directed Studies**  
Fall, Spring, Summer. 1 to 30 credits. A student may earn a maximum of 30 credits in all enrollments for this course. SA: BIM 620  
Individual or group work on special problems related primarily to the biomechanics of the musculoskeletal system.
- 800 Special Topics**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. SA: BIM 800  
Directed study in topics of biomechanics.
- 890 Independent Study**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 22 credits in all enrollments for this course. R: Approval of department. SA: BIM 890  
Individual or group work related to biomechanics and/or neuromuscular system.
- 899 Master's Thesis Research**  
Fall, Spring, Summer. 0(2-2) A student may earn a maximum of 25 credits in all enrollments for this course. SA: BIM 899  
Master's thesis research.