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NUAN 449. Chemical and Physical Properties of Anesthesia. 1 Unit.
Introduction and elaboration of basic chemical and physical principles as they relate to clinical nurse anesthesia practice. An in-depth study of organic and biochemical principles, structure/activity, relationships and their significance in pharmacology. Emphasis will be on the integration and practical application of these principles to clinical nurse anesthesia practice.

NUAN 450. Pharmacological Strategies in Anesthesia Practice. 1 Unit.
Application of pharmaco-kinetic and pharmaco-dynamic principles as they relate to specific anesthetic and adjunct drugs used in anesthesia practice. Integration of this information into clinical area regarding anesthetic uses, dosages, and side effects of these classes of drugs is emphasized. Coreq: NUAN 449.

NUAN 451. Physiological Variables and Responses I: Respiratory System. 1 Unit.
A detailed study of the anatomical structures and related physiochemical mechanisms governing respiratory function in health and disease. Assess the functional integrity of this system utilizing all pertinent objective and subjective data. Consider the impact of anesthetic agents and techniques on this system and how one can plan an anesthetic to facilitate health-seeking behaviors as a patient attempts to attain, maintain or regain optimal health. The effects of anesthesia, implications and for all types of surgery, and the impact on the respiratory system will be discussed. Prereq: NUAN 459 and NURS 453.

NUAN 452. Physiological Variables and Responses: The Cardiovascular System. 1 Unit.
A detailed study of the anatomical structures and related physiochemical mechanisms governing cardiovascular function in health and disease. Assess the functional integrity of this system utilizing all pertinent objective and subjective data. Consider the impact of anesthetic agents and techniques on this system and how one can plan anesthetic to facilitate health-seeking behaviors as patients attempt to attain, maintain, or regain optimal health. Implications for all types of surgery in view of effect of anesthesia on cardiovascular system, however, special attention on surgery involving this specific system. Coreq: NUAN 459 and NURS 453.

NUAN 453. Physiological Variables and Responses III: Peds, OB, Endo & Geriatrics. 1 - 5 Units.
Study of health-seeking behaviors and intervening variables with special consideration of the anatomy, physiology, and pathophysiology of the pediatric and obstetric, endocrine and geriatric patient. Focus will be on the integration of this information into the nurse anesthesia care to support the health-seeking behaviors of these patients. Prereq: NUAN 451 and NUAN 452.

NUAN 454. Physiological Variables and Responses IV: Renal and Neurologic Systems. 3 Units.
Systematic investigation of the physiologic factors related to health-seeking behaviors with special emphasis on pathophysiology of the renal and neurological systems. Focus will be on the integration of this knowledge into the planning, implementation, and evaluation of patients requiring nurse anesthesia intervention. Prereq: NUAN 453.

NUAN 455. Anesthesia Nursing I. 1 Unit.
An introduction to the art and science of nurse anesthesia including basic anesthetic principles and beginning clinical practicum to introduce the student to anesthetic equipment and operating room environment. This course is designed to give the student practical information regarding administration of safe anesthesia.

NUAN 456. Anesthesia Nursing II. 1 Unit.
Progressive, guided instruction on the clinical and ethical management of clients undergoing all forms of anesthesia. This course is designed to prepare the nurse in the administration of a safe, routine anesthetic with a moderate amount of instructor intervention. Prereq: NUAN 458 and NUAN 459.

NUAN 457. Anesthesia Nursing III. 1 Unit.
Graduated, guided instruction in clinical management of clients receiving various types of anesthesia. Focus is on the preparation and planning for anesthesia utilizing Schlotfeldt paradigm. Includes actual administration of anesthesia for clients exhibiting more complicated pathophysiology. More advanced technical instruction and experience. Coreq: NUAN 449.

NUAN 458. Principles of Anesthesia I. 2 Units.
An introduction to the art and science of nurse anesthesia, including basic anesthetic principles, chemical and physical properties of anesthesia, and basic Anesthetic pharmacology. This course is designed to introduce students to basic anesthesia safety, Anesthesia practice, and the operating room environment. Prereq: NUAN 456.

NUAN 459. Principles of Anesthesia II. 2 Units.
In-depth study of principles of regional anesthesia and pain management. Emphasis is placed on relevant anatomy and physiology, preoperative assessment and appropriate patient selection, appropriate use of equipment, pharmacology of commonly used medications, techniques for administration, and physiologic alterations/complications. Prereq: NUAN 458.

NUAN 460. Advanced Principles of Anesthesia 1. 3 Units.
An in-depth exploration of the anatomy, physiology, and pathophysiology of the cardiovascular, respiratory, and hematologic systems in the context of anesthesia care. Implications of cardiovascular, respiratory, and hematologic disease for all types of surgery are explored, with emphasis on anesthetic management of surgical procedures related to these systems. Prereq: NUAN 459.

NUAN 461. Advanced Principles of Anesthesia 2. 2 Units.
An in-depth exploration of the anatomy, physiology, and pathophysiology of the renal, endocrine, and neurologic systems in the context of anesthesia care. Implications of renal, endocrine, and neurologic disease for all types of surgery are explored, with emphasis on anesthetic management of surgical procedures related to these systems. Prereq: NUAN 460.

NUAN 462. Advanced Principles of Anesthesia 3. 3 Units.
An in-depth exploration of the anatomy, physiology, and pathophysiology of pediatric, obstetric, and geriatric patients within the context of anesthesia care. Implications of physiologic changes across the lifespan are explored, with emphasis on the anesthetic management of anesthetic and surgical procedures related to these patient populations. Prereq: NUAN 461.
NUAN 551A. Nurse Anesthesia: Advanced Practice IA. 2 Units.
Individual, in-depth study of advanced clinical nurse anesthesia in such
specialty areas as neurosurgical, cardiovascular, obstetric and pediatric
anesthesia. The nurse learns to handle more difficult, specialized patients
who are at a higher risk. Emphasis is on more complex management with
advanced monitoring techniques, use of pharmacological agents and
handling higher stress situations. Students develop and utilize practical
clinical applications of nurse anesthesia theory. Students are individually
assigned to specialty areas and are formally evaluated at the end of each
rotation. Prereq: NUAN 462.

NUAN 551B. Nurse Anesthesia: Advanced Practice IB. 1 Unit.
Individual, in-depth study of advanced clinical nurse anesthesia in such
specialty areas as neurosurgical, cardiovascular, obstetric and pediatric
anesthesia. The nurse learns to handle more difficult, specialized patients
who are at a higher risk. Emphasis is on more complex management with
advanced monitoring techniques, use of pharmacological agents and
handling higher stress situations. Students develop and utilize practical
clinical applications of nurse anesthesia theory. Students are individually
assigned to specialty areas and are formally evaluated at the end of
each rotation. Case presentations and group discussion designed to
assist the student in conceptualizing, analyzing and evaluating various
nurse anesthesia strategies as they relate to the client’s health seeking
behaviors and goals are also emphasized. Prereq: NUAN 551A.

NUAN 551C. Nurse Anesthesia: Advanced Practice I. 1 - 5 Units.
(See NUAN 551A.) Prereq: NUAN 551B.

NUAN 552. Nurse Anesthesia: Advanced Practice II. 1 - 5 Units.
The continuation of advanced, independent clinical nurse anesthesia
administration. Emphasis is on management of higher risk patients for
more difficult procedures, performing total anesthetic care with minimum
of anesthesiologist supervision, and readiness for transition from student
to graduate status. Prereq: NUAN 551A and NUAN 551B and NUAN 551C.