

## DELAWARE INSTITUTE OF HEALTH SCIENCES

### *Course Descriptions*

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#### Block One

##### **Anatomy and Physiology**

This course introduces the student to essential basic information from the sciences of Anatomy, Physiology, Microbiology, and Chemistry. This scientific framework will allow the student to understand how the human body attempts to compensate in the presence of disease and will foster development of skills of observation necessary to report and monitor symptoms that result from malfunction of a particular organ or system.

At the completion of this course, the student will be able to:

- ✓ Describe basic biological concepts.
- ✓ List the parts & functions of the human cell.
- ✓ Diagram the layers of human tissues.
- ✓ Describe the integumentary system.
- ✓ Describe the musculo-skeletal system.
- ✓ List the parts and function of the respiratory system.
- ✓ List the parts and function the circulatory system.
- ✓ List the parts and function the nervous system.
- ✓ List the parts and function the endocrine system.
- ✓ List the parts and function the genitor-urinary system.
- ✓ List the parts and function the digestive system.

**Prerequisites:** None

**Classroom Hours:** 45

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##### **Human Growth and Development**

Human growth and development studies the development of the person throughout the lifespan from initial conception to death. Current research theories are studied to describe and explain the physical, cognitive, social, emotional and personal development infancy, childhood, adolescence, young adulthood, middle age, and late adulthood. The importance of environmental factors in development and the application of research and theory is promoted.

At the completion of this course, the student will be able to:

- ✓ Describe how psychologists gather, analyze and apply information gained through the study of child growth and development.
- ✓ List and describe major theorists including Maslow, Piaget, Erikson, Skinner, Freud and how their theories relate to human behavior.
- ✓ Discuss the controversial issues surrounding the study of child psychology.
- ✓ Describe key developments occurring in the prenatal stage and how to assess prenatal growth and development.
- ✓ Identify the critical developmental norms and tasks from infancy through old age.
- ✓ Diagram Maslow's Hierarchy of Needs and relate to nursing practice.
- ✓ Outline key biological psychological cognitive, social and cultural factors that influence child development.
- ✓ Describe psychosocial and cultural patterns that affect health care practices and beliefs

**Classroom Hours:** 30

## **Fundamentals of Nursing**

This course introduces students to scientific principles and practices of nursing which are essential for basic nursing care of the adult patient. Emphasis is placed on the nursing process, theory and clinical laboratory to provide the learning experience for development of those skills necessary to meet patient needs. Orem's theory of self-care supports the framework of nursing care.

At the completion of this course, the student will be able to:

- ✓ List the steps in the nursing process and essential activities.
- ✓ Explain the role of the nurses and other health team members in the health care system.
- ✓ Review the history of nursing and major contributors to nursing knowledge.
- ✓ Explain self-care deficit and other commonly occurring nursing diagnoses..
- ✓ Utilize medical terminology and common abbreviations used in nursing practice.
- ✓ Demonstrate competency in basic nursing skills required for nursing practice.
- ✓ Utilize the nursing process to remediate common deficit issues and meet patient needs.
- ✓ Explain professionalism and critical thinking.
- ✓ Discuss ethical and legal issues in nursing.
- ✓ Identify basic health needs and patient teaching principles that foster self care.
- ✓ Explain codes for nursing and professional behaviors.
- ✓ List standards of practice and the limitations of the practical nurse role.
- ✓ Explain confidentiality and the nurses' role in maintaining patient rights and advocacy.

**Prerequisites:** Anatomy and Physiology

**Classroom Hours: 75, Laboratory Hours: 90**

**Clinical Hours: 45**

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## **Block Two**

### **Pharmacology 1 and Nursing Math**

This course is designed to provide the framework necessary for accurate dosage calculation of medication and the principles of safe, competent drug administration. It includes review of basic math concepts and conversion between various measurement systems. Lab experience allows the student to gain competency with medication administration and various delivery systems. Major classifications of drugs, actions, adverse effects and the application of the nursing process are incorporated into the course.

At the completion of this course, the student will be able to:

- ✓ Calculate drug dosages correctly using conversion systems and physician orders.
- ✓ Identify the parts of a valid physician order.
- ✓ Demonstrate the 5 rights of medication administration and appropriate documentation.
- ✓ Describe nursing measures and safe practices to avoid medication errors.
- ✓ Demonstrate competency with the different routes of medication administration.
- ✓ Describe drug interactions, reactions & effects
- ✓ Describe elements to document on patient records regarding patient teaching and evaluation of drug effects.
- ✓ Describe the nursing implications in medication administration.
- ✓ Explain the nursing process and its relation to medication administration.
- ✓ Explain adrenergic blocking agents and nursing implications..
- ✓ Describe cholinergic agents and nursing implications...
- ✓ Describe cholinergic blocking agents and nursing implications..
- ✓ Describe legal implications of Narcotic control and nursing responsibilities.
- ✓ Describe narcotics and narcotic antagonists and nursing implications.

- ✓ Describe narcotic analgesics and nursing implications.
- ✓ Describe alternative measures to relieve pain and promote comfort.
- ✓ Describe sedatives and hypnotics and nursing implications.
- ✓ Describe cardiotonics and antiarrhythmic drugs and nursing implications.
- ✓ Explain anticoagulant & thrombocytic drugs and nursing implications.
- ✓ Explain antiangexal agents and peripheral vasodilants drugs and nursing implications.
- ✓ Explain the management of body fluids & electrolytes.
- ✓ Explain the role of the practical nurse in IV therapy and maintenance of central lines.
- ✓ Explain diuretics and antihypertensive drugs and nursing implications.
- ✓ Explain CNS stimulants and nursing implications.
- ✓ Describe insulin and hypoglycemic drugs and nursing implications.
- ✓ Explain the sulfonamides and nursing implications.
- ✓ Demonstrate administration of medication to at least ten (10) patient simulations in the campus lab using the MAR & medication cart and pass all elements on the critical check off form.

**Prerequisites: None**

**Classroom Hours: 30**

**Lab Hours: 30**

## **Pharmacology II**

This course is designed to define the regulations for safe administration of medications in the clinical setting and the practical nurse's responsibility in clinical pharmacology. Practices and principles related to safe, competent care of all ages is reinforced.

At the completion of this course, the student will be able to:

- ✓ Demonstrate competency with dosage calculation for medications and IV drip rates.
- ✓ Describe substance abuse and nursing assessments.
- ✓ Describe tolerance, dependence, addiction, and withdrawal and nursing interventions.
- ✓ Describe the role of the pharmacist.
- ✓ Describe the nursing role with various medication delivery systems and electronic and traditional charting.
- ✓ Describe Over The Counter (OTC) and homeopathic agents used in health care.
- ✓ Describe patient teaching topics related to medications and safety.
- ✓ Adapt medication administration to meet the needs of infants and children and patients with special needs.
- ✓ Describe the penicillin and the cephalosporins and nursing implications.
- ✓ Describe broad-spectrum antibiotics and antifungal drugs and nursing implications.
- ✓ Discuss antitubercular agents and nursing implications.
- ✓ Describe therapies used in the treatment of parasitic infections.
- ✓ Describe miscellaneous anti-infection agents.
- ✓ Describe pituitary and adrenocortical hormones and nursing implications.
- ✓ Describe male & female hormones and nursing implications.
- ✓ Describe thyroid drugs and nursing implications.
- ✓ Describe drugs acting on the uterus and nursing implications.
- ✓ Explain antineoplastic agents and nursing implications.
- ✓ Describe anticonvulsant agents and nursing implications.
- ✓ Describe antiparkinsonianism agents and nursing implications.
- ✓ Describe drugs used for respiratory disorders and nursing implications.
- ✓ Describe drugs used in the management of gastrointestinal disorders and nursing implications.
- ✓ Explain the use antiemetic and antivertigo drugs and nursing implications.

- ✓ Explain the use of vitamins, function and related diseases.
- ✓ Explain the use of immunologic agents and nursing implications.
- ✓ Describe anesthetic agents and nursing implications.
- ✓ Explain therapies used in the management of musculoskeletal disorders and nursing implications.
- ✓ Discuss ethical/legal issues and the impaired nurse in rehabilitation.
- ✓ Continue independent practice in the lab using the medication administration cart and at least twenty (20) MARs using models and mannikins
- ✓ Role play calling the physician about certain situations, including:
  - Reporting a dosage error
  - Reporting an abnormally high blood glucose on a post –op patient
  - Requesting an anti-emetic for a patient with nausea

**Prerequisite:** Fundamentals of Nursing  
Pharmacology I

**Classroom Hours:** 15

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### **Elementary Microbiology for Nurses**

This course will cover basic elementary microbiology principles including microorganisms & cell biology and how they affect the human body. The course includes basic content related to disease causing organisms, asepsis, and sterilization that relate to nursing practice.

At the completion of this course, the student will be able to:

- ✓ List the major groups of organisms studied in microbiology.
- ✓ Review the nurse's role in Universal Precautions and isolation procedures.
- ✓ Define normal flora and their role in the body.
- ✓ Define the infectious process cycle and nursing implications.
- ✓ List several properties of water that are important to living systems.
- ✓ Distinguish between inorganic and organic molecules.
- ✓ Identify the three basic shapes of bacteria.
- ✓ Compare and contrast aerobic and anaerobic respiration.
- ✓ Define bacterial growth and factors that encourage the growth in the body.
- ✓ Describe the types & preferred uses for disinfectants.
- ✓ List methods of sterilization.
- ✓ Determine common blood types and nursing interventions with blood therapy.
- ✓ Define genetics and relate to disease incidence and susceptibility.
- ✓ Describe DNA replication and how DNA serves as genetic information.
- ✓ Describe characteristics of bacterial groups.
- ✓ Classify viruses according to their morphology.
- ✓ Explain four methods of transmission of disease.
- ✓ Differentiate between a communicable and non-communicable disease and nursing measures to prevent the spread of disease.
- ✓ Describe bacterial diseases of the body systems.
- ✓ Describe viral diseases of the body systems.
- ✓ Describe microbial diseases of the body systems.

**Prerequisites:** None

**Classroom Hours:** 45

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## Block Three

### Nutrition and Diet Therapy

This course offers a solid foundation in the basic principles and concepts of good nutrition, which can enable nurses to help their clients toward better health through nutritional awareness. Various nutritional disorders and related diseases are discussed. Special diets ordered by physicians and nursing implications are discussed.

At the completion of this course, the student will be able to:

- ✓ **Assess the nutritional needs of various age groups.**
- ✓ **Demonstrate a nutritional history and interview with an individual and a family.**
- ✓ Name the six classes of nutrients and their primary functions.
- ✓ Identify food sources of each of the six classes of nutrients.
- ✓ Recognize symptoms of malnutrition and nursing interventions.
- ✓ Plan a balanced diet. for a diabetic/insulin dependent patient, a hyper-active child, a gastric by-pass patient, an anorexic teenager, an obese person, blind paraplegic, a pregnant mother, a stroke patient with dysphagia, a burn patient, a manic-depressive patient, a lactose intolerant toddler, a depressed elderly person, a person on chemotherapy with stomatitis, and other designated persons.
- ✓ Describe the processes of digestion, absorption, and metabolism.
- ✓ Describe the classifications of carbohydrates, proteins & fats and function in the body and nutritional sources.
- ✓ Describe the functions of water in the body.
- ✓ Identify substances that cause food poisoning and common symptoms.
- ✓ Identify nutritional needs during infancy, childhood, adolescence, pregnancy, middle adulthood, and late adulthood
- ✓ Discuss the dangers of overweight and underweight and nursing interventions.
- ✓ Describe diabetes mellitus and identify its different types and nursing implications.
- ✓ Identify factors that contribute to cardiovascular disease and the role of nutrition in prevention and recovery.
- ✓ Discuss how nutrition can be related to the development or the prevention of cancer.
- ✓ Describe how illness and surgery can affect the nutrition of clients.
- ✓ Describe the use of vitamins and nutritional supplements to enhance function and optimal growth
- ✓ Adapt diets and diet therapy to meet cultural and religious differences.

**Prerequisite: None**

**Classroom Hours: 30**

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### Medical-Surgical Nursing I

The student is presented with the pathophysiology of common diseases of the adult patient that the student might encounter in the nursing practice. Emphasis is placed on providing care within the framework of the nursing process. The presentation of diseases is organized according to the body systems and physiological needs with emphasis on compassionate, safe nursing interventions.

At the completion of this course the student will be able to:

- ✓ Use the nursing process to provide safe, competent care to assigned patients with supervision using appropriate care plans based on scientific rationale and nursing knowledge.
- ✓ Demonstrate & describe the role of a nurse in initial assessment.
- ✓ Discuss adult health in health and illness and the impact on the family.
- ✓ Discuss concepts of pain and common nursing interventions.
- ✓ Demonstrate care of patients with altered fluid/electrolyte balance and imbalance.
- ✓ Demonstrate care of patient experiencing trauma and shock.
- ✓ Demonstrate care of patients having surgery and prevention of complications.
- ✓ Demonstrate care of patients with infections and altered immunity and nursing implications.
- ✓ Plan the care of patients experiencing loss, grief, and death and special needs.
- ✓ Demonstrate the care of patients with substance abuse problems.
- ✓ Demonstrate care of patients with integumentary problems.
- ✓ Demonstrate the care of patients with burns.
- ✓ Demonstrate the care of patients with endocrine disorders.
- ✓ Practice nursing skills in the lab with supervision to gain competency.
- ✓ Demonstrate a complete assessment on at least three persons in the lab.
- ✓ Collaborate and communicate with other health care team members to provide quality care.
- ✓ Document nursing care using various agency forms and systems.
- ✓ Provide empathetic care within legal and ethical parameters.

**Prerequisites:** Fundamentals of Nursing

**Classroom Hours:** 60, **Lab Hours:** 30

**Clinical Hours:** 135

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### **Maternal Health Nursing**

Basic and essential maternal nursing care is presented. The course is designed to help the student gain competence in the field of practical nursing for maternal health. Anatomy and physiology, as it relates to this course is reviewed. Normal pregnancy, complications of pregnancy, maternal health and neonatal needs are covered in depth. Cultural, ethical, pharmaceutical, and current trend issues guide the student are reinforced.

At the completion of this course, the student will be able to:

- ✓ Define family-based childbearing and developmental asks..
- ✓ Describe human reproduction from conception to delivery.
- ✓ Describe fetal development and common anomalies..
- ✓ Define adaptations to pregnancy and psychosocial needs..
- ✓ Describe prenatal care and patient teaching topics..
- ✓ Define complications of pregnancy and common interventions.
- ✓ Outline the 4 signs of labor and nursing implications.
- ✓ Demonstrate pain management during labor and birth and nursing measures to promote comfort.
- ✓ Demonstrate complications of labor and birth and nursing interventions.
- ✓ Plan the care of high risk pregnant woman, a pregnant teenager, a rape victim, a retarded mother, and other special needs persons.
- ✓ Demonstrate care of the neonate and provide appropriate nursing interventions to promote optimal health.
- ✓ Discuss caring for the family following birth and measures to promote bonding.
- ✓ Discuss methods of birth control and ethical issues related to childbearing.

- ✓ Plan dietary alterations to meet gestational needs and promote fetal & maternal well being and health.
- ✓ Provide empathetic care within legal and ethical parameters using the nursing process.

**Prerequisites:** Fundamentals of Nursing

**Classroom Hours:** 45

**Clinical Hours:** 20

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### **Pediatric Health Nursing**

Basic and essential pediatric nursing care is presented. The course is designed to help the student gain competence in the field of practical nursing for child health. Anatomy and physiology, as it relates to this course is reviewed. Infant and child health, growth and development patterns are covered in depth. Cultural, ethical, pharmaceutical, and current trend issues guide the student in his or her role as a child nurse.

At the completion of this course, the student will be able to:

- ✓ Describe the assessment of the normal newborn.
- ✓ Demonstrate the care of the pre-term & post-term neonate.
- ✓ Discuss the neonate with special needs and nursing interventions.
- ✓ Discuss ethical issues related to pregnancy, abortion, adoption, rape, incest, foster care, and childbearing.
- ✓ Review the normal growth and development tasks of infant through young adult..
- ✓ Identify common childhood illness, immunization needs, and nursing implications.
- ✓ Discuss nutritional factors affecting growth and development and patient teaching topics.
- ✓ Describe the maturational stages of normal growth & development.
- ✓ Discuss the child with special needs and community resources to assist with care.
- ✓ Discuss hospitalization and its impact on children 0-18 years of age.
- ✓ Describe common health issues of children and preventive care and measures.
- ✓ Discuss prevention programs to promote health care and the well being of children.
- ✓ List signs of child abuse and legal issues related to nursing care.
- ✓ Discuss ethical issues relating to children with special needs and supportive measures.
- ✓ Provide empathetic care within legal and ethical parameters using the nursing process.

**Pre-requisites:** Fundamentals of Nursing

**Co-requisites:** Maternal Health Nursing

**Classroom Hours:** 40

**Clinical Hours:** 20

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## **Block Four**

### **Psychiatric & Mental Health Nursing**

This course is designed to acquaint the student with concepts of mental illness, psychiatric nursing concepts, and healthcare delivery. Therapeutic communication and empathetic nursing care are stressed as students interact with persons who have an alteration or psychiatric disorder. The client's psychosocial needs are presented, as well as the nursing care designed to attain, maintain and promote the client's integrity related to those needs.

At the completion of this course, the student will be able to:

- ✓ Use the nursing process to provide safe, competent care to assigned patients in a psychiatric and community mental health setting using appropriate care plans based on scientific rationale and nursing knowledge.
- ✓ Discuss conceptual models of psychiatric care and common treatment plans.
- ✓ Review psychotropic drugs and nursing implications.
- ✓ Describe stress and psychological disorders and nursing implications.
- ✓ Define alterations in self-concept in persons with mental health disorders.
- ✓ Discuss anxiety and nursing implications.
- ✓ Define disorders associated with anxiety and nursing implications.
- ✓ Define mood disorders and nursing implications.
- ✓ Discuss suicide and nursing implications.
- ✓ Discuss alterations in thought & perception and nursing implications.
- ✓ Discuss personality disorders and nursing implications.
- ✓ Define substance abuse and addictive behaviors and nursing implications.
- ✓ Discuss anger, violence in the work setting.
- ✓ Discuss assault behavior and nursing implications.
- ✓ Discuss family violence and preventative measures and family teaching.
- ✓ Discuss current treatment modalities and nursing implications.
- ✓ Plan nursing care within ethical and legal parameters to promote therapeutic milieu.
- ✓ Identify community resources for acute and long term care.
- ✓ Identify phases of adjustment to long term care of the psychiatric patient and the family unit.
- ✓ Define the role of the nurse in the mental health nursing.

**Prerequisite:** Fundamentals of Nursing

**Classroom:** 30

**Clinical Hours:** 45

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## **Gerontological Nursing**

This course is designed to prepare the Practical Nursing student to provide nursing care to the aged patient in both the Acute Care and Long Term Care settings. The student is introduced to the elderly population as a group; identifying social, cultural and physical changes that affect their lives. Degrees of health and health maintenance are presented along the continuum from independence and active living to dependence and total care in a Long Term Care facility or at home. The student is also introduced to leadership concepts and implements them in the clinical setting.

At the completion of this course, the student will be able to:

- ✓ Use the nursing process to provide safe, competent care to assigned patients using appropriate care plans based on scientific rationale and nursing knowledge.
- ✓ Identify factors that influence older adults and the aging process.
- ✓ Discuss aging theories.
- ✓ Describe normal changes and developmental tasks with aging.
- ✓ Discuss the nutritional needs and changes in the older adult.
- ✓ Complete a nutritional assessment of an older adult and identify caloric needs.
- ✓ Discuss physiological changes that affect medication and drug therapy in older adults.
- ✓ Discuss clinical problems that are prevalent in the older adult and nursing implications.
- ✓ Discuss common chronic diseases of the older adult and nursing implications.
- ✓ Discuss the various aspects of different care settings and the older adult.
- ✓ Identify community resources to aid the adjustment of older adults.



- ✓ Identify signs of elder abuse and legal issues.
- ✓ Review the care of the dying patient, stages of grief and post mortem care.
- ✓ Discuss legal/ethical issues that are pertinent to the older adult.
- ✓ Demonstrate patient advocacy and the nurse role in patient rights.

**Prerequisites:** Fundamentals of Nursing

**Classroom Hours:** 30

**Clinical Hours:** 45

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## Medical-Surgical Nursing II

The student is presented with the pathophysiology of common diseases of the adult patient that the student might encounter in the nursing practice. Emphasis is placed on providing care within the framework of the nursing process. The presentation of diseases is organized according to the body systems and physiological needs.

At the completion of this course the student will be able to:

- ✓ Demonstrate the use the nursing process to provide safe, competent care to assigned patients using appropriate care plans based on scientific rationale and nursing knowledge.
- ✓ Plan the care of patients with altered nutritional status.
- ✓ Plan the care of patients with gastrointestinal disorders.
- ✓ Plan the care of patients with gallbladder, liver and pancreatic disorders.
- ✓ Plan the care of patients with altered bowel elimination.
- ✓ Plan the care of the patient with alterations in urinary elimination.
- ✓ Plan the care of the patient with alteration in renal function.
- ✓ Plan the care of the patient with alterations in cardiac function.
- ✓ Plan the care of the patient with alteration in respiratory function.
- ✓ Plan the care of the patient with musculo-skeletal disorders.
- ✓ Plan the care of the patient with neurological problems.
- ✓ Plan the care of the patient with altered visual and auditory functions.
- ✓ Plan the care of the patient with altered sexual and reproductive function.
- ✓ Demonstrate advanced nursing skills including phlebotomy, IV care, suctioning, and monitoring treatment protocols.
- ✓ Demonstrate leadership principles and patient advocacy as part of the health team.
- ✓ Interact and communicate with other health team members to provide holistic, quality care.
- ✓ Implement and evaluate planned nursing care and outcomes within ethical and legal parameters.

**Prerequisites:** Medical Surgical Nursing I

Fundamentals of Nursing

**Classroom Hours:** 60, **Lab Hours:** 30

**Clinical Hours:** 135

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## Career and Personal Development

This course is designed to facilitate transition from the student role to the graduate, practicing nurse role. The focus is on building successful behaviors for the graduating Practical Nursing student by presenting nursing leadership and management skills necessary for the entry-level nurse. Emphasis is placed on gaining competency with NCLEX simulation software and familiarity with professional & licensure issues. A comprehensive course review is offered based on the NCLEX-PN board exam.

At the completion of this course, the student will be able to:

- ✓ Integrate leadership roles and management function into nursing interventions.
- ✓ Discuss tools for leadership and management problem-solving and decision-making.
- ✓ Meet educational needs for team-building.
- ✓ Participate in organizational, interpersonal, and group communication.
- ✓ Delegate responsibility in the workplace and demonstrate accountability and effective communication.
- ✓ Define leadership and delegation concepts and nursing implications and skills.
- ✓ Discuss career development issues and life long learning opportunities.
- ✓ Discuss methods for the nurse to maintain competency and advance nursing knowledge.
- ✓ Outline the career/education ladder and resources for the LPN.
- ✓ Prepare a portfolio, resume, cover letter and resignation letter to a potential employer.
- ✓ Role-play job interview skills.
- ✓ Demonstrate competent nursing care using the nursing process within ethical and legal parameters.
- ✓ Demonstrate critical thinking and the ability to adapt in a variety of practice settings.
- ✓ Discuss Legal and Ethical Issues facing the practicing nurse.
- ✓ Demonstrate 90% proficiency on NCLEX-PN simulation exam.
- ✓ Describe the Nurse Practice Act, LPN role limitations, and licensure/renewal process.
- ✓ Complete application process for licensure as a LPN and submit application.
- ✓ List various professional nursing organizations and their role.

**Prerequisites:** Anatomy and Physiology  
Fundamentals of Nursing  
Pharmacology I and II  
Medical and Surgical Nursing I & II  
Maternal and Child Health Nursing  
Psychiatric & Mental Health Nursing  
Gerontological Nursing

**Classroom Hours:** 65

**Laboratory Hours:** 40

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**Cancellation:** Delaware Institute of Health Sciences reserves the right to cancel/postpone any class prior to the scheduled start date for which there is deficient registration; the content of the course will be taken into consideration.