



Doctor of Nursing Practice with specialization in Anesthesia Nursing

SCIENCE BACKGROUND COURSES

The admissions committee expects that applicants will have a background in the basic science coursework that is part of most BSN and/or health science curricula. This preparation is important to success both as a student in our program and as a practicing CRNA after graduation.

COURSE / TOPIC	COMPARABLE* COURSE AT THE UNIVERSITY OF IOWA		
	NUMBER	TITLE	OVERVIEW
ANATOMY	ACB:3110	Principles of Human Anatomy	Gross and microscopic human anatomy; systemic approach to regional anatomy, with emphasis on clinical relevance
PHYSIOLOGY**	HHP:1400	Human Anatomy & Physiology	Introductory human anatomy and physiology; overview of the structures and functions of most organ systems of the body, including the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive systems; how multiple organ systems work together to maintain health; health-related information.
PATHOLOGY / PATHO-PHYSIOLOGY**	NURS:3518	Pathology	Introduction to abnormal functioning of cells, tissues, organs, and systems over the human lifespan; focus on hematological, immune, neurological, musculoskeletal, cardiovascular, respiratory, renal, gastrointestinal, endocrine, and reproductive system; alterations in metabolic processes and alterations in homeostatic mechanisms impacting the internal milieu. Emphasis on critical thinking
PHYSICAL ASSESSMENT+	NURS:3128	Health Assessment & Communication Across the Lifespan	Development and application of cognitive skills to perform systematic, holistic, and culturally competent health assessments; emphasis on application of clinical reasoning involving assessment, nursing diagnoses, interventions, and outcomes.
PHARMACOLOGY	NURS:3138 / 3438	Nursing Pharmacological Interventions I / II	Basic biophysical concepts that inform nursing and pharmacological interventions, including sleep, immobility, skin care, wound healing, infection, and human response to illness; selected disorders and/or diseases, including GI disease, disorders of bowel and urine elimination, diabetes, and cancer; introduction to health literacy and principles of health education.
BIOLOGY	BIOL:1141	Human Biology: Health Professions	Molecular and cellular basis of human life; structure, function of human tissues, organs, organ systems; evolution, reproduction, genetics, impact of molecular biology and genetic engineering; integration of humans and the biosphere
	OR BIOL:1140	Human Biology: Nonmajors	

* COURSES LISTED ARE COMPARABLE COURSES AT THE UNIVERSITY OF IOWA. SIMILAR OR HIGHER-LEVEL COURSES AT THE UI OR OTHER INSTITUTIONS ARE OFTEN ACCEPTABLE. IF YOU HAVE QUESTIONS, ASK THE ANESTHESIA NURSING PROGRAM OFFICE. COURSES INTENDED FOR NON-SCIENCE MAJORS ARE GENERALLY NOT ADEQUATE. PRE-PROFESSIONAL SCIENCE COURSES ARE PREFERRED.

** SOME CURRICULUM MODELS INCLUDE COMBINED PATHOLOGY/PATHO-PHYSIOLOGY COURSES. IN THIS CASE A TOTAL OF 6 S.H. OF COMBINED PATHOLOGY/PATHO-PHYSIOLOGY COURSES IS ACCEPTABLE.

+ SOME CURRICULUM MODELS INTEGRATE PHYSICAL ASSESSMENT THROUGHOUT THE PROGRAM. IT MAY BE NECESSARY TO PROVIDE DOCUMENTATION IF THIS IS THE CASE.



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SCIENCE BACKGROUND COURSES (CONTINUED)

MICROBIOLOGY	MICR:3164	Microbiology & Human Health	Overview of bacteria, viruses, and eukaryotic microorganisms that cause human disease; Microbial structure, growth control, and reproduction; immunology & host defenses.
INORGANIC CHEMISTRY	CHEM:1070	General Chemistry I	Atomic structure, chemical bonds, mole relations, stoichiometry, states of matter, acids and bases, reaction rates, electrochemistry, nuclear chemistry.
ORGANIC CHEMISTRY	CHEM:1080	General Chemistry II	Organic chemistry and biochemistry.
BIO-CHEMISTRY	CHEM:1080	General Chemistry II	Organic chemistry and biochemistry.
COLLEGE PHYSICS	PHYS:1400	Basic Physics	Quantitative treatment of mechanics, electricity, heat, liquids, gases, and atomic, nuclear, and elementary particle physics.

Your undergraduate nursing curriculum may not meet the entire list of anesthesia nursing program science background courses. If this applies to you and you plan to apply to the UI Anesthesia Nursing Program; you may need to build these prerequisites into your curriculum as electives or take them after graduation to be a competitive candidate.

OTHER RELEVANT TOPICS/SKILLS:

BASIC / INTRODUCTORY STATISTICS	Applicants should have an introductory-level familiarity with basic topics of statistics such as graphing techniques for presenting data, descriptive statistics, correlation, regression, prediction, logic of statistical inference, elementary probability models, estimation and tests of significance.
MATHEMATICS	Applicants are expected to have familiarity and facility with the math and calculations found in many of the science coursework topics listed and in nursing practice. Math plays a critical role in the safe and effective practice of anesthesia, influencing everything from drug dosing to patient monitoring to equipment calibration.
COMPUTER COMPETENCY SKILLS	Applicants are expected to have mastered a basic to intermediate level of computer competency in preparation for successful navigation of the DNP program.

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