

MONTANA STATE UNIVERSITY-BOZEMAN
COLLEGE OF NURSING
Master Resource Outline
NRSNG 602 Advanced Physiology and Pathophysiology

Credits: 4 (lecture)

Semester Offered: Fall

Prerequisites: none

Degree: DNP

DNP Essentials: I, II, III, IV, V, VII, VIII

Graduate Program Objectives: 1, 3

Course Description: This graduate nursing course provides a comprehensive examination of the physiological functioning and common pathophysiological alterations in humans. Course content builds on the fundamentals of anatomy, physiology, and pathology. Pathophysiology will be examined from the sub cellular level through to major body systems. This course will focus on the etiology, pathogenesis, developmental and environmental influences, and clinical manifestations of injury and disease.

Course Objectives:

1. Compare and contrast the physiology and pathophysiology of cellular function and structure.
2. Differentiate among the major mechanical, chemical, temporal, and spatial factors that influence basic cellular and tissue/organ functions.
3. Differentiate among genomics, proteomics, metabolomics and epigenetics that influence health.
4. Analyze the relationship between physiology and pathology within each of the following body systems:
 - Cardiovascular
 - Respiratory
 - Gastrointestinal
 - Hematologic/immune
 - Endocrine
 - Musculoskeletal
 - Neurological
 - Renal
 - Integumentary
 - Sexual and reproductive
5. Discuss developmental physiology, etiology, pathogenesis, and clinical manifestations of common acute and chronic diseases.

Approved by GAAC: 1/30/12; modified 10/29/12; amended 11/5/12; 8/19/2016

Approved by Faculty: 4/9/12; modified 1/7/2013; 8/19/2016