I. COURSE OBJECTIVES

This course provides students with the skills to:

1. Apply knowledge of normal physiology to interpretation of pathogenesis in common altered states
2. Analyze the importance, critical functions, and interactions of major organ system
3. Evaluate current research regarding evidence-based care in discussion of common disease states and alteration
4. Examine the epidemiology of select disease processes
5. Apply the knowledge of pathophysiology to the process of patient education
6. Utilize critical thinking skills in class discussion, written work, online assignments, and oral/visual/voice-enhanced presentations

II. SUPPLEMENTAL OBJECTIVES

1. Apply knowledge of normal physiology to interpretation of pathogenesis in common altered states

Neurological system
- System and function
- Concepts of neurologic dysfunction
- Alterations in cognitive networks, cerebral homeostasis, motor function
- Central nervous system disorders
- Peripheral nervous system disorders

Endocrine system
Mechanism of hormonal regulation
Function of endocrine glands
Alteration in hormonal regulation

**Hematologic system**
Components of the hematologic system
Development of red blood cells
Mechanism of hemostasis
Alteration in erythrocyte, leukocyte, lymphoid, and splenic function
Alteration in coagulation

**Cardiovascular and Lymphatic system: Heart, Systemic, Lymphatic Circulation**
Alterations of cardiovascular function
Diseases of arteries and veins
Disorders of heart wall
Heart disease
Shock

**Pulmonary System**
Function and structure of pulmonary system
Alterations in pulmonary function and disease
Significance of arterial blood gas analysis on system function

**Renal and Urologic System**
Alterations of renal and urinary tract
Urinary tract obstruction
Urinary tract infection
Glomerular diseases
Renal failure

**Reproductive System**
Development and differentiation of reproductive systems
Alterations in sexual maturation
Disorders of female and male reproductive tract
Disorders of the breast

**Digestive System**
Disorders of gastrointestinal tract
Motility problems
Gastritis
Peptic ulcer disease
Inflammatory bowel disease
Disorders of the accessory organs of digestion: liver, gallbladder, and pancreas
Cancer of the digestive system

**Musculoskeletal System**
Structure and function of bones, joints, and muscles
Disorders of bones, joints, and muscles
Musculoskeletal injuries

**Integumentary System and Multiple Interacting Systems**
Disorders of the skin
Shock, Burns
Multiple organ dysfunction syndrome
2. **Analyze the importance, critical functions, and interactions of major organ system**
   - Normal function of major organ systems
   - Behavioral processes in human illness
   - Effect of stress on illness
   - Importance of immunity in the health of individuals
   - Role of inflammation in disease processes

3. **Evaluate current research regarding evidence-based care in discussion of common disease states and alteration**
   - Evidence-based practice within each system
   - Role of clinical guidelines in practice
   - Utilization of new technology to implement evidence-based practice

4. **Examine the epidemiology of select disease processes**
   - Impact of chronic diseases such as coronary heart disease on a population basis
   - Best practice in the care of diabetes mellitus
   - Impact of caring for chronic disease states on the health care system

5. **Apply the knowledge of pathophysiology to the process of patient education**
   - Patient education when explaining a disease during an office visit
   - Best practices through a variety of teaching modalities

6. **Utilize critical thinking skills in class discussion, written work, online assignments, and oral/visual/voice-enhanced presentations**