**COURSE INFORMATION FORM**

<table>
<thead>
<tr>
<th>DISCIPLINE</th>
<th>Biology</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE TITLE</td>
<td>Introduction to Pathophysiology</td>
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<td>CR.HR</td>
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<td>CLOCK HR.</td>
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**CATALOG DESCRIPTION**

Causes, signs, symptoms and pathological changes in structure and function of the human body in common diseases. Selected diagnostic and treatment procedures. Some general public health aspects.

**PREREQUISITES**

BIOL 110 and BIOL 210 or  
BIOL 108 or  
BIOL 109

**EXPECTED STUDENT OUTCOMES IN THE COURSE**

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

1. Describe the etiology, pathology, signs, symptoms, diagnosis and treatment of selected diseases, using correct medical terminology.
2. Classify diseases based on etiology or type of disease and indicate the primary body system or organ affected.
3. Use principles of physiology to explain the manifestations of selected diseases at both the cellular and systemic level.
4. Identify societal issues arising from the cause, nature, or treatment of particular diseases.
5. Analyze, interpret and synthesize information in medical records, case reports or current medical literature.
CLASS-LEVEL ASSESSMENT MEASURES

Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

- Written objective and essay examinations (1, 2, 3, 4, 5)
- Participation in class discussion on assigned topics (3 and 4)
- Written and oral report of interview with an individual with a chronic disease (1, 4, 5)
- Written or oral report(s) on assigned journal articles(s) (5)
- Oral or written case study analysis (1, 2, 3, 4, 5)

PROGRAM-LEVEL OUTCOMES Addressed

General Education Outcomes
Specify which general education outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes and assessment measures.

Occupational Program Outcomes
Specify which occupational program outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes to assessment measures.
DISCIPLINE: Biology

COURSE TITLE: Introduction to Pathophysiology

Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Basic concepts of disease processes
   A. Introduction to pathophysiology
      1. Definitions of terms used in pathophysiology
      2. Classification of diseases
      3. Cellular adaptations and damage
   B. Inflammation and healing
      1. Definition and causes of inflammation
      2. Characteristics of acute and chronic inflammation
      3. Treatment of inflammation
      4. Healing process
      5. * Example: burns
   C. Immunity
      1. Review of the immune system
      2. Immunodeficiency
         *Example: acquired immunodeficiency syndrome (AIDS)
      3. Hypersensitivity
      4. Autoimmune disorders
         *Example: systemic lupus erythmatosus
   D. Infection
      1. Types of microorganisms
      2. Principles, transmission and control of infection
      3. Development, diagnosis and treatment of infection
      4. * Example: influenza
   E. Neoplasms
      1. Characteristics of benign and malignant neoplasms
      2. Nomenclature
      3. Pathophysiology, etiology, diagnosis and treatment of malignant tumors
      4. * Examples of malignant tumors: skin, brain and ovarian cancer
   F. Fluid, electrolyte and acid-base imbalances
      1. Edema and dehydration
      2. Sodium, potassium and calcium imbalances
      3. Other electrolytes
      4. Acid-base indicators

II. Effects of altered Status, developmental disorders and stages of growth on disease
   A. Congenital and genetic disorders
      1. Overview of genetic control
      2. Congenital defects
      3. Single-gene, chromosomal and multifactorial genetic defects
      4. Developmental disorders
      5. Diagnosis and therapy
      6. * Example: Down syndrome
   B. Pain
      1. Causes and characteristics
      2. Pain management
   C. Stress
   D. *Adolescence
   E. * Pregnancy
   F. * Aging
G. * Immobility
H. *Environmental hazards
I. * Substance abuse
J. * Basic pharmacology and other therapy

III. Pathophysiology of the systems
A. Blood and lymphatic disorders
B. Cardiovascular disorders
   1. Heart disorders
   2. Heart failure
   3. Vascular disorders
   4. Shock
C. Respiratory disorders
   1. General manifestations
   2. Infections
   3. Obstructive disorders
   4. Restrictive/expansion disorders
   5. Vascular disorders
D. Digestive disorders
   1. Common manifestations
   2. Upper gastrointestinal disorders
   3. Disorders of the liver, gallbladder and pancreas
   4. Lower gastrointestinal disorders
E. Urinary system disorders
   1. Diagnosis and treatment
   2. Infections
   3. Inflammatory disorders
   4. Obstruction
   5. Vascular disorders
   6. Congenital disorders
   7. Renal failure
F. Neurologic disorders
   1. General effects of neurologic dysfunction
   2. Acute disorders
   3. Chronic disorders
      a. Congenital disorders
      b. Seizure disorders
      c. Degenerative disorders
G. * Disorders of the eye and ear
H. Endocrine disorders
   1. Diagnostic tests and treatment
   2. Disorders of specific endocrine glands
I. Musculoskeletal disorders
   1. Trauma
   2. Bone diseases
   3. Joint diseases
   4. Diseases of muscles, tendons, ligaments
J. * Skin disorders
   1. Infections
   2. Tumors
   3. Inflammatory disorders
K. Reproductive system disorders
   1. Disorders of the male reproductive system
      a. Structural disorders
      b. Infertility
      c. Tumors, infections, inflammatory diseases
   2. Disorders of the female reproductive system
      a. Structural disorders
      b. Menstrual disorders
      c. Infertility
      d. Infections and tumors
   3. Sexually transmitted diseases