

**The University of Texas at Tyler
College of Nursing and Health Sciences**

**NURS 3303
Pathophysiology of Acute Care**

Fall 2007

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Wednesday

AM Session: 0900 – 1150

PM Session : 1300 - 1550

Student Affirmation Form

____ I agree to protect the privacy of faculty, peers, patients, and family members of patients by not inappropriately disclosing confidential information about faculty, peers, patients or their family members that is disclosed to me in my capacity as a University of Texas at Tyler nursing student. In addition, I agree not to inappropriately disclose confidential information about any agency or institution that is disclosed to me in my capacity as a University of Texas at Tyler nursing student. I will adhere to HIPAA guidelines.

____ I have/will read the syllabus of this nursing course I am taking this semester, and I understand the criteria established for grading my course work. I understand that my average on exams must be 75 or higher in order to attain a passing grade for the course.

____ I agree that I will conduct myself in a manner that exhibits professional values and in accordance with the American Nurses Association (ANA) Code of Ethics for Nurses, the Texas Nurse Practice Act and UTT's Student Academic Dishonesty Policy.

____ I will maintain and uphold the academic integrity policy of the College of Nursing and will not condone or participate in any activities of academic dishonesty including, but not limited to, plagiarism, cheating, stealing, or copying another's assigned work.

____ I will not recreate any items or portions of any exam for my own use, or for use by others during my enrollment in the College of Nursing

____ I will not accept or access any unauthorized information related to any exam administered during my enrollment in the College of Nursing.

____ I will sign only my own papers and other documents and will not sign any other student's name to anything, including class rolls.

____ I will not allow any other student access to any of my paperwork for the purpose of copying.

Student Signature

Date

Printed Student Name

NURS 3303
Course

APPROVED:
University of Texas System-Spring 1996
Faculty Organization-Spring 1996
Revised: May 2004, Summer 2005

AUDIO/VIDEO-RECORDING AGREEMENT

I have been given permission to audio record the following class, **NURS 3303**.

I understand that, the recordings are for **my personal studies only**. I realize that lectures recorded **may not be shared** with other people without the written consent of the faculty member. I also understand that recorded lectures may not be used in any way against the faculty member, other lecturer, or students whose classroom comments are recorded as part of the class activity.

I am aware that the information contained in the recorded lectures is protected under federal copyright laws and may not be published or quoted without the expressed consent of the lecturer and without giving proper identity and credit to the lecturer. I agree to abide by these guidelines with regard to any lectures I record while enrolled as a student at The University of Texas at Tyler.

Due to the confidential nature of some course content, I agree to provide written documentation of the erasure of any recordings made during the current semester. Failure to return this written documentation to the faculty by the date of the final examination will result in a grade of "I" (Incomplete).

Signature of Student

Date

Signature of Witness

Title of Witness

If a student tapes a course they must sign and agree to the terms of this policy

NURS 3303 - Pathophysiology of Acute Care
CLASS SCHEDULE Fall 2007

Date	Topic	Chapters	Faculty
8/22	Course Orientation, Cell Biology Review, Cellular Changes Fluids, Electrolytes, and Acid-Base Balance	1,6	Cheek
8/29	Inflammation, Healing and Infection <i>On-line Quiz 1</i>	2,4	Cheek
9/5	<i>Exam 1</i> (cell biology, cellular changes, fluid, electrolytes, acid-base, inflammation, healing and infection) Immune and Abnormal Responses	3	Cheek
9/12	Immune and Abnormal Responses Congenital and Genetic Disorders Neoplasms	3, 7, 5	Cheek Steele
9/19	Neoplasms Blood and Lymph Disorders <i>On-line Quiz 2</i>	5, 17	Steele, Price
9/26	<i>Exam 2</i> (immune disorders, genetics, neoplasms, blood and lymph) Skin Disorders	2,27	Price
10/3	Cardiovascular Disorders – flow and pump	18	Price
10/10	Cardiovascular Disorders – pump and shock <i>On-line Quiz 3</i>	18	Price
10/17	Respiratory Disorders	19	Cheek
10/24	<i>Exam 3</i> (cardiovascular and respiratory disorders) Reproductive Disorders	28	Steele
10/31	Urinary Disorders Acute Neurological Disorders <i>On-line Quiz 4</i>	21, 22	Steele
11/7	Acute Neurological Disorders, Pain, Chronic Neurological Disorders	22, 13, 23	Steele
11/14	<i>Exam 4</i> (reproductive, acute and chronic neurological disorders, pain and urinary disorders)	ERI up	
11/21	<i>Holiday Holiday Holiday</i> <i>Holiday Holiday</i>	<i>Holiday</i> <i>ay ay</i>	<i>Holiday</i> <i>ay ay</i>
11/28	Musculoskeletal Disorders Endocrine Disorders <i>On-line Quiz 5</i>	26, 25	Price
12/5	Gastrointestinal Disorders ERI due	20	Price

12/12

Exam 5

(musculoskeletal, endocrine and gastrointestinal disorders)

TITLE

NURS 3303: Pathophysiology of Acute Care

SEMESTER CREDIT HOURS

Three (3) hours didactic

PREREQUISITES

Successful completion of Anatomy and Physiology 1 & 2, Microbiology, and Chemistry. The course may be taken 1 semester prior to admission to the College of Nursing, or must be taken during the first semester admitted to the nursing program.

COURSE DESCRIPTION

This course focuses on the etiologic, symptomatologic, and pathologic aspects of selected human diseases across the life span. Concepts of health promotion, disease prevention, disease progression, and treatment are approached from a cellular and multi-system perspective. Influences of genetic, ethnic, and cultural variables on human diseases is analyzed. Content aims at stimulating critical thinking.

COURSE OBJECTIVES

Upon successful completion of the course, students will have demonstrated the ability to:

1. Compare, at the cellular level and systemic levels, the pathologic effects of selected disease processes.
2. Correlate internal/external environmental risk factors with disease development and progression.
3. Critique the influence of genetic, ethnic, and cultural factors in health promotion, disease prevention, disease progression, and treatment.
4. Interpret diagnostic tests in relation to objective and subjective symptomatology.
5. Evaluate for the presence and effects of compensatory mechanisms in response to major physiologic alterations.
6. Discuss major variables affecting the healing process in primary tissues and organ systems, and apply such concepts to the management and treatment of disease.
7. Describe the impact of pathophysiology-based knowledge on nursing practice within the context of a specified nursing model.
8. Apply critical thinking process to the use of pathophysiologic principles as a basis for nursing practice.
9. Employ select nursing and biomedical research studies in the application of pathophysiologic principles to nursing practice.

American Disabilities Act Statement: UT TYLER COUNSELING CENTER

"If you have a disability, including a learning disability, for which you request an accommodation, please contact the Disability Support Services Office so that appropriate arrangements can be made. In accordance with federal law, a student requesting accommodation must provide documentation of his/her disability to the Disability Support Services counselor." For more information call 566-7079.

GRADING POLICIES

Completion of NURS 3303 is based on satisfactory attainment of meeting the course objectives. Any student failing to meet the course objectives and expectations must repeat the course.

1. The simple average of the exam grades must be 75 or above to pass the course. The cumulative scores of the five on-line quizzes will constitute a test score. This simple average will NOT include the homework points. The simple average of 75% must be attained before the weights are applied to the scores and the homework is added into the final calculation of the grade. **A SIMPLE AVERAGE OF 74.5 - 74.9 WILL NOT BE ROUNDED TO 75.**
2. Students with an exam average of 75 or higher will have the course grades calculated based on the weighted calculation of the exams and at this point homework points will be added. Students who

are not successful attaining the 75% cut off point will not get credit for the homework and grade will be assigned based on simple average. The weighted values of course work are:

5 classroom exams	75%
On-line Quizzes	15%
Homework	10%

3. Grades will be assigned according to the following scale:

A 90 -100
B 80-89
C 75-79
D 60-74
F 60 and below

(Approved Faculty Organization: Fall 1999, implemented Spring 2000)

4. Toward the end of the term, all students are required to complete a diagnostic exam from ERI (Educational Resources, Inc.). The availability of the exam will be announced on blackboard. This exam is part of the ERI testing program of the College of Nursing and must be taken until the student achieves a score equal to or surpassing the national average on the exam. The exam can be taken at anytime during the approximately 2 weeks that it is available. It is highly recommended that the student utilize the campus computer labs to take this exam.

A copy of the student's diagnostic printout will be required prior to taking the last exam for the course. The exam completion print out can be submitted to the faculty prior to or the day of exam 5.

5. On-line quizzes will be posted on Blackboard as indicated in the syllabus schedule. Each quiz will be worth 20 points. The five (5) quiz scores will be added to make an exam score that will be calculated within the simple average calculations. The quizzes will be available for seven days. Failure to complete the quiz within this time frame will result in 0 points for that quiz.

6. Homework assignments will be noted in the syllabus. Homework assignments are due at the beginning of the class date in which that subject will be presented. Homework assignments that are submitted after 1050 on the due date will have 10 points deducted from the total attained score. An additional 10 points will be deducted from attained score for each class day the assignment is late. Homework points will be incorporated to overall grade once the student has attained the required 75% test average as indicated in the weighted values of course work.

EXAMINATION AND EXAMINATION REVIEW POLICY

1. Attendance for exams is **mandatory**.
2. If absence for an exam is necessary, the student is responsible for notifying the faculty **prior** to the quiz with an acceptable reason.
3. No students will be allowed entry into the classroom after the exam has started unless prior notification and arrangements have been made with the faculty.
4. Exams will be distributed at the time class is scheduled to begin.
5. All hats/caps must be removed during quiz time. All personal items such as purses, books, backpacks, notebooks and briefcases will be left in the front of the room during testing.
6. Silence will be enforced during the testing. In order to avoid distraction, no one will be permitted to leave the room during the testing time.
7. Make-up exams will only be given at the discretion of the faculty member and may be in a different format than the original exam.

Failure to notify the course faculty of the need to take the exam on an alternate date prior to the time that class begins will result in a grade of 0 for that particular exam. Tests must be scheduled with faculty on the specific campus. Arrangements will be made on an individual basis for completion of exam requirements.

1. No in-class reviews will be conducted. Exam review may be scheduled with the faculty during office hours and within 10 school days from the return of grades.

Group review will be conducted after each exam. The students will form groups of 3-5. Each group will be provided with a blank copy of the exam. The students will review the test and come to a consensus on the answer. When all groups are completed with the review, the students may ask faculty to clarify concepts presented in the tested material. **Absolutely no recording, writing or replication of the exam will be allowed.**

EXPECTATIONS OF STUDENTS IN NURS 3303

1. Understanding of anatomy and physiology is presumed. If a student requires review of basic anatomy and physiology, independent reading is expected. Study guides will focus on terms and anatomy and physiology of the system under study.
2. Students are expected to have read and prepared for discussion and interaction about the content according to the objectives.
3. Participation in classroom learning activities which will focus on application of concepts presented in required reading.
4. Students are responsible for all course assignments and content, including announcements posted in Blackboard.
5. Lecture outlines will be posted to Blackboard a minimum of two (2) working days prior to class and will be removed at midnight prior to class.
6. All submitted written material (papers, assignments, examinations, etc.) are the property of the College of Nursing. They will be maintained in an archived file at the College of Nursing for 1 term after the course grade is assigned.

ACADEMIC INTEGRITY

1. Students are expected to assume full responsibility for the content and integrity of all academic work submitted as homework and examinations.
2. Students are advised to review the UT Tyler Academic Dishonesty Policy and Academic Integrity Policy in the current College of Nursing Student Handbook and Academic Integrity Policy for UT Tyler students in the Student Guide. These policies are fully endorsed and enforced by the faculty members within the College of Nursing.
3. Plagiarism, cheating and collusion are unacceptable and if found violating any of these standards the student will be disciplined accordingly.
4. The College of Nursing reserves the right to dismiss students from the program for any infraction of a legal, moral, social, or safety nature, pursuant to the procedures detailed in the *Regent's Rules*.

Student Dress Code for the University of Texas, College of Nursing:

General: It is the philosophy of the College of Nursing that the student has a responsibility to be neatly groomed and modestly dressed. Appearances should promote good health, safety and general well-being of the student. Clothing should avoid brevity and/or design that are offensive to the dignity and rights of others. School officials have the right and responsibility to counsel with the student or take any other corrective action. Types of clothing (other than those specified in this document) may be worn at the direction of the nursing instructor for special events.

Classroom: Casual or every day business wear is recommended. This includes but is not limited to the following: Slacks or skirt; sweater, blouse, and shirt. Jeans as well as conservative shorts (mid-thigh or longer) may be worn, but avoid overly frayed or soiled. Shoes must be worn. See items to be avoided below.

Professional Presentations, Ceremonies/ Graduation: Business or dressy day social: suit, dress, dressy separates, jacket, ties, nice fabrics. Dress shoes. Avoid denim, jeans, t-shirt or other casual clothes. For workshops/seminars attended by students, business attire will be worn.

Items to be avoided in all School-related Functions (including but not limited to): Overly frayed, worn or soiled garments. Costume look, transparent blouses, bare midriff shirts, tank tops, spaghetti straps, muscle shirts, overtly sexual, gang colors or logos, facial or body piercing, obscene slogans or pictures, bedroom wear, short-shorts, short skirts, or clothing that may be offensive to others.

If the dress code rules are broken and a change of clothes is not available, the student may be removed from the school-related function for the remainder of the day. **Appropriate disciplinary action will be taken for repeated violations of this code.**

REQUIRED TEXTS

SYLLABUS: NURS 3303: Pathophysiology of Acute Care; Fall 2007

TEXTBOOK:

Gould, B. (2006) Pathophysiology for the Health Professions (3rd ed.). Saunders. ISBN 1416002103.

** The content of this syllabus/WEB site is subject to change at the discretion of the faculty leaders according to current learning needs.

All lecture outlines with supplementary material is found under the Lectures button in Blackboard. Bring material to class and be prepared for discussion. Be aware that as one topic is completed, discussion on the next topic will begin. Look ahead and be prepared.

Cell Biology Review

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe the cellular components and the functions of each. 2. Discuss the functions of the cell membrane. 3. Explain how cells communicate. 4. Explain how tissues are formed. 5. Identify types of tissue and state examples of each. 	<ol style="list-style-type: none"> 1. Cell function <ol style="list-style-type: none"> a. all cells b. specialized 2. Cell Components <ol style="list-style-type: none"> a. structures b. functions 3. Cell Membrane <ol style="list-style-type: none"> a. control b. communication c. conductivity 4. Tissues and Organs <ol style="list-style-type: none"> a. epithelial b. connective c. muscular d. nerve 	<p>READ:</p> <p>HOMEWORK ASSIGNMENT: None</p> <p>EVALUATION: Online quiz - 1 Exam 1</p>

Cellular Adaptation

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe common cellular adaptations and possible reasons for the occurrence of each. 2. Identify precancerous cellular changes. 3. List the common causes of cell damage 4. Describe the common types of cell necrosis and possible outcomes 5. Differentiate between apoptosis and necrosis. 	<ol style="list-style-type: none"> 1. Cell Adaptation <ol style="list-style-type: none"> a. healthy b. pathologic 2. Cell Damage Mechanisms <ol style="list-style-type: none"> a. hypoxia b. free radicals c. physical injury 3. Necrosis <ol style="list-style-type: none"> a. liquification b. coagulative c. caseous d. infarction e. gangrene 	<p>READ: Gould, Chapter 1</p> <p>HOMEWORK ASSIGNMENT: Study Questions 4, 8 – Pages 15 - 16</p> <p>EVALUATION: Online quiz - 1 Exam 1</p>

Fluid, Electrolyte and Acid Base Balance

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Explain the movement of water between body compartments. 2. Describe the mechanism of edema. 3. Discuss the causes and effects of dehydration 4. Compare and contrast the causes, signs and symptoms of hyponatremia and hypernatremia. 5. Compare and contrast the causes, signs and symptoms of hypokalemia and hyperkalemia. 6. Compare and contrast the causes, signs and symptoms of hypocalcemia and hypercalcemia. 7. Describe the relationship of phosphorus to calcium. 8. Describe the compensatory mechanism of acid-base homeostasis. 9. Explain the effects of the primary types of alterations of acid-base balance on body function. 	<ol style="list-style-type: none"> 1. Body Water <ol style="list-style-type: none"> a. compartments b. movement <ol style="list-style-type: none"> 1. mechanisms 2. controls c. Edema <ol style="list-style-type: none"> 1. mechanism 2. consequences d. Dehydration <ol style="list-style-type: none"> 1. mechanism 2. consequences 2. Electrolytes <ol style="list-style-type: none"> a. Sodium <ol style="list-style-type: none"> 1. function 2. hyponatremia 3. hypernatremia b. Potassium <ol style="list-style-type: none"> 1. function 2. hypokalemia 3. hyperkalemia c. Calcium <ol style="list-style-type: none"> 1. function 2. hypocalcemia 3. hypercalcemia d. Phosphorus <ol style="list-style-type: none"> 1. function 2. relationship with calcium 3. Acid- Base Balance <ol style="list-style-type: none"> a. compensatory mechanisms b. acidosis <ol style="list-style-type: none"> 1. respiratory 2. metabolic c. alkalosis <ol style="list-style-type: none"> 1. respiratory 2. metabolic d. compensation 	<p>READ: Gould, Chapter 6</p> <p>HOMEWORK ASSIGNMENT: Study Questions 4, 6, 13, 15 – pages 156-157</p> <p>EVALUATION: Online quiz - 1 Exam 1</p>

Inflammation, Healing and Infection

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Explain the role of normal defenses in preventing disease. 2. Describe the chemical and cellular responses to injury. 3. Discuss normal capillary exchange and this exchange during the inflammatory response. 4. Describe the local and systemic effects of inflammation. 5. Describe the types of healing and complications of each. 	<ol style="list-style-type: none"> 1. Normal Defenses 2. Inflammatory Process <ol style="list-style-type: none"> a. Chemical mediators b. Cellular responses c. Capillary responses d. Signs and Symptoms <ol style="list-style-type: none"> 1. local 2. systemic 3. Healing <ol style="list-style-type: none"> a. Types b. Process c. Scar tissue <ol style="list-style-type: none"> 1. function 2. complications 	<p>READ: Gould, Chapter 2, 4</p> <p>HOMEWORK ASSIGNMENT: Study Questions 3, 14 – page 42</p> <p>EVALUATION: Online quiz - 1 Exam 1</p>

Immune and Abnormal Responses

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe the normal immune response. 2. Differentiate between cell mediated and humoral responses. 3. Explain the methods of acquiring immunity. 4. Describe the mechanisms of the four types of hypersensitivity 5. Reactions and give examples of each. 6. Discuss the mechanism of autoimmune disorders. 7. Explain the causes and effects of immunodeficiency. 8. Describe the course, effect and complications of HIV –AIDS. 	<ol style="list-style-type: none"> 1. Immune Response <ol style="list-style-type: none"> a. Cell mediated b. Humoral 2. Immunity <ol style="list-style-type: none"> a. Acquisition b. Types <ol style="list-style-type: none"> 1. I – hay fever 2. II – Blood incompatibility 3. III – Autoimmune Disorders 4. IV – transplant rejection 3. Immunodeficiency <ol style="list-style-type: none"> a. Causes b. Effects c. HIV- AIDS <ol style="list-style-type: none"> 1. course 2. effects 3. complications 	<p>READ: Gould, Chapter 3</p> <p>HOMEWORK ASSIGNMENT: Study Questions 2, 5, 9 – page 74</p> <p>EVALUATION: Online quiz - 2 Exam 2</p>

Skin Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe common skin lesions. 2. Discuss conditions of inflammation of the skin. 3. Compare and contrast skin cancers. 4. Discuss the pathologic results of a thermal injury. 	<ol style="list-style-type: none"> 1. Anatomy of Skin <ol style="list-style-type: none"> a. Structure b. Function 2. Inflammation <ol style="list-style-type: none"> a. Processes and Effects b. Common lesions 3. Cancers <ol style="list-style-type: none"> a. Causes and effects b. Conditions <ol style="list-style-type: none"> 1. Basal cell 2. Squamous Cell 3. Melanoma 4. Thermal Injuries <ol style="list-style-type: none"> a. Causes b. Degree <ol style="list-style-type: none"> 1. Partial Thickness 2. Deep Partial Thickness 3. Full Thickness c. Effects <ol style="list-style-type: none"> 1. Shock 2. Pain 3. Infection 	<p>READ: Gould, Chapter 27, and pages 34 -41 (Burns)</p> <p>HOMEWORK ASSIGNMENT: Think about 27-3 – part b - page 680 Think about 27-5 – part d – page 688</p> <p>EVALUATION: Online quiz - 2 Exam 2</p>

Congenital and Genetic Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe the interrelationships of DNA, RNA and proteins. 2. Discuss prediction of inheritance. 3. Describe and cite examples of chromosomal disorders. 4. Describe and cite examples of single-gene disorders. 5. Discuss the Human Genome Project and possible impacts on health care. 	<ol style="list-style-type: none"> 1) Genetic Building Blocks <ol style="list-style-type: none"> a) DNA b) Chromosomes c) Genes 2) Principles of predication <ol style="list-style-type: none"> a) Autosomal dominant b) Autosomal recessive c) X- linked 3) Chromosomal abnormality <ol style="list-style-type: none"> a) Downs syndrome 4) Gene abnormality <ol style="list-style-type: none"> a) Duchenne’s Muscular Dystrophy 5) Human Genome Project 	<p>READ: Gould, Chapter 7</p> <p>HOMEWORK ASSIGNMENT: Study Questions 4, 8 – page 174</p> <p>EVALUATION: Online quiz - 2 Exam 2</p>

Neoplasms

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Define "cancer" in terms of abnormal tissue growth, cell types of origin and benign vs. malignant tumor properties. 2. Explain the methods of staging and grading tumors. 3. Identify viral, bacterial and environmental risk factors for cancer. 4. Review the clinical manifestations of cancer. 	<ol style="list-style-type: none"> 1) Cancer characteristics <ol style="list-style-type: none"> a) Cell abnormalities b) Tumor properties <ol style="list-style-type: none"> i) Benign ii) Metastatic 2) Categorizing Cancers <ol style="list-style-type: none"> a) staging b) grading c) prognosis 3) Risk Factors <ol style="list-style-type: none"> a) Viral b) Bacterial c) Environmental 4) Clinical Manifestations 	<p>READ: Gould, Chapter 5</p> <p>HOMEWORK ASSIGNMENT: Study Questions 1, 2, 4 – page 126</p> <p>EVALUATION: Online quiz - 2 Exam 2</p>

Blood and Lymphatic Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Define anemia and describe the manifestations of anemia and the pathophysiology that generates them. 2. Compare and contrast the pathophysiology underlying iron deficiency, pernicious, and folate deficiency anemias. 3. Differentiate the leukemias by manifestations, treatment options, and prognosis. 4. Identify the causes of thrombocytopenia and its signs and symptoms related to its pathophysiology. 5. Discuss the conditions that predispose and individual to the development of thrombi. 	<ol style="list-style-type: none"> 1) Blood Characteristics <ol style="list-style-type: none"> a) Red blood cells b) White blood cells c) Platelets d) plasma 2) Problems of red blood cells <ol style="list-style-type: none"> a) Iron deficiency anemia b) Pernicious anemia c) Sickle Cell anemia 3) Problems of white blood cells <ol style="list-style-type: none"> a) leukemia 4) Problems with platelets <ol style="list-style-type: none"> a) Thrombocytopenia 	<p>READ: Gould, Chapter 17</p> <p>HOMEWORK ASSIGNMENT: Study Questions 1, 3, 4 – page 300</p> <p>EVALUATION: Online quiz - 2 Exam 2</p>

Cardiovascular Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe the principles that govern blood flow and pump function. 2. Discuss the factors influencing the systemic blood pressure and blood flow. 3. Identify the risk factors for atherosclerosis and discuss the progression of atherosclerotic heart disease from risk factor identification through the complications of acute myocardial infarction. 4. Discuss the physiologic effects of hypertension. 5. Describe venous flow disturbances and potential complications. 6. Discuss the factors that determine effective heart pumping functions, including dysrhythmias and structural defects. 7. Compare left and right heart failure, including causation, manifestations, treatment, and complications. 8. Identify and describe the pathophysiologic effects of shock. 	<ol style="list-style-type: none"> 1) Alterations of flow <ol style="list-style-type: none"> a) Principles b) Atherosclerosis c) Ischemia vs. infarction d) Aneurysm e) Hypertension f) Venous flow <ol style="list-style-type: none"> i) Varicose Veins ii) Deep Vein Thrombosis 2) Alterations in Pump <ol style="list-style-type: none"> a) principles b) impulse conduction c) structural defects <ol style="list-style-type: none"> i) valves ii) congenital defects d) pump failure <ol style="list-style-type: none"> i) left sided ii) right sided e) cardiomyopathy f) restriction 3) Shock <ol style="list-style-type: none"> a) processes b) origins <ol style="list-style-type: none"> i) cardiogenic ii) hypovolemic iii) neurogenic iv) septic 	<p>READ: Gould, Chapter 18</p> <p>HOMEWORK ASSIGNMENT: Study Questions 1, 4, 15 – page 360</p> <p>EVALUATION: Online quiz - 3 Exam 3</p>

Respiratory Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Explain the mechanics and controls of ventilation. 2. Discuss the pathological processes of inflammation and how it effects air movement in the lungs. 3. Describe the mechanical changes of lung or chest trauma that interfere with air movement. 4. Discuss the pathological processes that precipitate a change in gas exchange in the lung. 5. Describe the pathological mechanisms and effects of changes in pulmonary blood flow. 	<ol style="list-style-type: none"> 1. Controls <ol style="list-style-type: none"> a. Thoracic mechanics b. Chemical controls 2. Inflammation <ol style="list-style-type: none"> a. Processes and Effects b. Conditions <ol style="list-style-type: none"> 1. Asthma 2. Pneumonia 3. Tuberculosis 4. Lung Cancer 3. Mechanical Alterations <ol style="list-style-type: none"> a. Causes and effects b. Conditions <ol style="list-style-type: none"> 1. Pneumothorax 2. Chest wall trauma 4. Gas Exchange Alterations <ol style="list-style-type: none"> a. Causes and Effects b. Conditions <ol style="list-style-type: none"> 1. Cystic Fibrosis 2. Chronic Bronchitis 3. Emphysema 4. Pulmonary Edema 5. Blood Flow Alterations <ol style="list-style-type: none"> a. Causes and effects b. Conditions <ol style="list-style-type: none"> 1. Pulmonary Embolus 2. Pulmonary Hypertension 	<p>READ: Gould, Chapter 19</p> <p>HOMEWORK ASSIGNMENT: Study Questions 1, 7, 10, 11- page 419</p> <p>EVALUATION: Online quiz - 4 Exam 3</p>

Reproductive Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Explain the function of the female and male reproductive systems. 2. Discuss the causes and effects of pelvic inflammatory disease and endometriosis. 3. Compare and contrast the primary cancers of women: ovarian, cervical and breast. 4. Review the differences between benign prostatic hypertrophy and prostate cancer as it relates to male reproductive function. 5. Compare and contrast common sexually transmitted diseases. 	<ol style="list-style-type: none"> 1) Female Reproductive Problems <ol style="list-style-type: none"> a) Pelvic Inflammatory Disease b) endometriosis c) Cancers <ol style="list-style-type: none"> i) Cervical ii) ovarian iii) breast 2) Male Reproductive Problems <ol style="list-style-type: none"> a) Benign Prostatic Hypertrophy b) Prostatic cancer 3) Sexually Transmitted Diseases <ol style="list-style-type: none"> a) bacterial b) viral 	<p>READ: Gould, Chapter 28</p> <p>HOMEWORK ASSIGNMENT: Study Questions 4, 8, 24- page 723</p> <p>EVALUATION: Online quiz - 4 Exam 3</p>

Urinary Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe the pathophysiology, symptoms and treatments for urinary tract obstructions. 2. Review causes, types and treatments of urinary tract infections. 3. Discuss types and causes of nephritis 4. Explain the pathophysiology, causes, symptoms and treatment for acute and chronic renal failure. 5. Discuss the role of the kidney in red blood cell production and control of blood pressure. 	<ol style="list-style-type: none"> 1) Inflammatory Problems <ol style="list-style-type: none"> a) Kidney <ol style="list-style-type: none"> i) nephritis b) bladder <ol style="list-style-type: none"> i) UTI 2) Blockage of system <ol style="list-style-type: none"> a) calculi b) Benign Prostatic Hypertrophy c) Prostatic cancer 3) Failure <ol style="list-style-type: none"> a) bacterial b) viral 4) Other functions <ol style="list-style-type: none"> a) hematopoiesis b) blood pressure 	<p>READ: Gould, Chapter 21</p> <p>HOMEWORK ASSIGNMENT: Study Questions 3, 6, 15 – page 520</p> <p>EVALUATION: Online quiz - 4 Exam 4</p>

Acute Neurological Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Discuss causes and outcomes of increased intracranial pressure, including causes. 2. Explain causes and outcomes of alterations in cranial blood flow focusing on ischemic events. 3. Discuss clinical symptoms of spinal cord injuries including differentiation, loss of function and levels of disability. 	<ol style="list-style-type: none"> 1) Increased Intracranial Pressure <ol style="list-style-type: none"> a) causes <ol style="list-style-type: none"> i) brain trauma ii) space occupying lesions iii) hemorrhage iv) edema b) compensatory mechanisms c) manifestations of ICP <ol style="list-style-type: none"> i) early ii) late 2) Cranial blood flow <ol style="list-style-type: none"> a) Cerebral Vascular Accident 3) Spinal Cord Injuries <ol style="list-style-type: none"> a) partial b) transaction c) neurogenic shock 	<p>READ: Gould, Chapter 22</p> <p>HOMEWORK ASSIGNMENT: Study Questions 7, 9, 12 – pages 567- 568</p> <p>EVALUATION: Online quiz - 5 Exam 4</p>

Pain

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Explore concepts of pain perception, modulation and clinical manifestations. 	<ol style="list-style-type: none"> 1) Pain <ol style="list-style-type: none"> a) transmission <ol style="list-style-type: none"> i) reflex arcs ii) sensory tracts b) Interpretation c) manifestations 	<p>READ: Gould, Chapter 13</p> <p>HOMEWORK ASSIGNMENT: Study Questions 3, 4 – page 236</p> <p>EVALUATION: Online quiz - 5 Exam 5</p>

Chronic Neurological Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Discuss causes and outcomes of seizure disorders. 2. Explain causes and outcomes of dementias. 3. Discuss causes and outcomes of chronic degenerative neuromuscular conditions. 	<ol style="list-style-type: none"> 1) Seizure Disorders <ol style="list-style-type: none"> a) Risk Factors b) Neurologic alterations c) Characteristics 2) Dementias <ol style="list-style-type: none"> a) Neurologic manifestations b) Phases <ol style="list-style-type: none"> i) Early ii) late 3) Chronic Neuromuscular Disorders <ol style="list-style-type: none"> a) Neurotransmitters <ol style="list-style-type: none"> i) Parkinson's b) Nerve degeneration <ol style="list-style-type: none"> i) Multiple Sclerosis 	<p>READ: Gould, Chapter 23</p> <p>HOMEWORK ASSIGNMENT: Study Questions 3, 4, 8 – page 593</p> <p>EVALUATION: Online quiz - 5 Exam 5</p>

Musculoskeletal Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe the structure and function of bones and muscles, including interaction of systems. 2. Describe the process of bone fractures and healing. 3. Discuss degenerative conditions of the bone and joints. 	<ol style="list-style-type: none"> 1) Structure and Function <ol style="list-style-type: none"> a) Bones b) Joints c) Muscles 2) Bones and Joints <ol style="list-style-type: none"> a) Fractures b) Degenerative Bones and Joints <ol style="list-style-type: none"> i) Osteoporosis ii) Osteoarthritis iii) Rheumatoid Arthritis iv) Gout 3) Muscles <ol style="list-style-type: none"> a) Fibromyalgia 	<p>READ: Gould, Chapter 26</p> <p>HOMEWORK ASSIGNMENT: Study Questions 5, 6 – page 669</p> <p>EVALUATION: Online quiz - 5 Exam 5</p>

Endocrine Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Discuss the regulation of hormone secretion by positive and negative feedback loops. 2. Compare and contrast Type 1 and Type 2 diabetes mellitus. 3. Describe the degenerative complications of diabetes mellitus. 4. Describe the condition of alterations in ADH on body function. 5. Discuss the effects of thyroid hormone and effects of alterations on the metabolism. 6. Discuss the role of corticosteroids in body function and changes when levels are altered. 7. Discuss the functions of aldosterone on body functions. 	<ol style="list-style-type: none"> 4) Hormonal control <ol style="list-style-type: none"> a) Feedback loops b) Target cell receptors 5) Pancreas - Insulin <ol style="list-style-type: none"> a) Diabetes Mellitus, type 1 b) Diabetes Mellitus, type 2 c) Complications 6) Pituitary – Antidiuretic Hormone <ol style="list-style-type: none"> a) SIADH b) Diabetes Insipidus 7) Thyroid – thyroxine <ol style="list-style-type: none"> a) Hyperthyroid (Graves) b) Hypothyroid (Myxedema) 8) Adrenal - <ol style="list-style-type: none"> a) Corticosteroids <ol style="list-style-type: none"> i) Too much ii) Too Little b) Aldosterone <ol style="list-style-type: none"> i) Too much ii) Too Little 	<p>READ: Gould, Chapter 25</p> <p>HOMEWORK ASSIGNMENT: Study Questions 3, 6, 10 – page 642</p> <p>EVALUATION: Exam 5</p>

Digestive System Disorders

Unit Objectives	Outline	Preparation and Evaluation
<ol style="list-style-type: none"> 1. Describe the physiologic alterations that occur in relation to infectious processes that cause gastroenteritis, hepatitis and pancreatitis. 2. Identify the consequences of obstruction at various sites in the GI tract. 3. Describe the causes, manifestations, treatments, outcomes, and complications of gastritis including ulcer disease and reflux problems. 4. Describe irritable bowel syndromes and differences between ulcerative colitis and Crohn disease. 5. Discuss the similarities and differences between acute and chronic pancreatitis. 6. Discuss the pathophysiologic alterations that occur with liver failure. 	<ol style="list-style-type: none"> 1) Conditions of Upper Gastrointestinal System <ol style="list-style-type: none"> a) Gastroesophageal Reflux (GERD) b) Peptic Ulcer Disease (PUD) c) Gastroenteritis <ol style="list-style-type: none"> (a) Bacterial (b) viral 2) Conditions of Lower Gastrointestinal System <ol style="list-style-type: none"> a) Irritable Bowel Syndromes b) Diverticulosis c) Bowel Obstruction 3) Conditions of Accessory Organs <ol style="list-style-type: none"> a) Liver <ol style="list-style-type: none"> i) Hepatitis ii) Cirrhosis iii) Failure b) Pancreatitis 	<p>READ: Gould, Chapter 20</p> <p>HOMEWORK ASSIGNMENT: Study Questions 10, 13, 14, 16, 18, 19 – pages 488 - 489</p> <p>EVALUATION: Exam 5</p>