The University of Texas at Tyler
School of Nursing

NURS 3303
Pathophysiology of Acute Care

Spring 2019

Tyler: Section 3303.001 and 3303.002
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** The content of this syllabus and course WEB site is subject to change at the discretion of the faculty leaders according to current learning needs.

COURSE 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 is required. Successful completion of NURS 3303 Pathophysiology is required for acceptance to the UT Tyler BSN program.

COURSE DESCRIPTION

This course focuses on the etiology, symptomatology and pathology of selected human diseases across the lifespan. 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. Integrate knowledge from the biological sciences into the study of the pathophysiology of human diseases.
2. Compare the pathologic origins of selected disease processes at the cellular and systemic levels.
3. Correlate the effects of internal and external environmental risk factors with disease development and progression.
4. Discuss the influence of genetic, ethnic and cultural factors on health promotion and disease prevention, progression and treatment.
5. Explain the effects of compensatory body mechanisms in response to major alterations in physiology.
6. Relate diagnostic test findings to both objective and subjective disease symptoms.
7. Employ select nursing and biomedical research studies in the application of pathophysiologic principles to nursing practice.
9. Discuss the impact of the current body of knowledge in pathophysiology on evidence-based nursing practice

REQUIRED MATERIALS

SYLLABUS: NURS 3303: Pathophysiology of Acute Care; Spring 2019 — also located in Canvas under Course Information for each campus

Course Schedules: located in Canvas under Course Information

REQUIRED TEXTBOOK/ONLINE ACCESS:

Capriotti, T. & Frizzell, J. P. (2016) *Pathophysiology: Introductory concepts and clinical perspectives*. Philadelphia, PA: F.A Davis Company. ISBN 978-0-8036-1571-7.

Davis Advantage Access Code – The access code to Davis Advantage-web based interactive activities is included with the purchase of the textbook. The code is located inside the front cover of the book
Text rentals: students renting or borrowing textbooks are **required to purchase** the digital Davis Advantage Access code. The access code can be purchased from FA Davis website (www.fadavis.com), ISBN 978-0-8036-5808. Note that this purchase includes access to the digital version of the textbook.

Class Day/ Times Spring 2019:

Tyler:

Section 001 Monday 1100 – 1345 BRB 1025 (face to face course)
Section 002 Thursday 1100 --1345 RBS (face to face course)

Longview:

Section 090 Tuesday 1300 – 1545 (hybrid class)

Palestine:

Section 070 Wednesday 0900 – 1145 (hybrid class)

Course Schedules:

Course schedules for each campus are posted in the course Canvas site. Schedules may vary by campus and/or teaching methods and include due dates for assignments, exams, and quizzes. Students are accountable for following the schedule and complying with submission dates.

Course Content by Week (see course calendar for each campus for specific dates)

Week1	Cellular Biology, Cellular Changes, Fluid and Electrolytes, Acid Base
Week 2	Inflammation, Healing and Infection
Week 3	Genetic Disorders
Week 4	Immune and Abnormal Responses
Week 5	Neoplasms, Blood and Lymph Disorders
Week 6	Renal and Urinary Disorders
Week 7 & 8	Cardiovascular Disorders
Week 9	Reproductive and Integumentary Disorders
Week 10	Musculoskeletal Disorders
Week 11	Acute and Chronic Neurological Disorders
Week 12	Respiratory Disorders
Week 13	Endocrine Disorders
Week 14	Gastrointestinal and Accessory Organ Disorders

CLASS PREPARATION/CANVAS INFORMATION

All lecture outlines with supplementary material are in modules in the Canvas learning management system. Bring lecture notes and any supplemental required materials to class and be prepared for discussion. Be aware that as one topic is completed, discussion on the next topic may begin.
Read assigned chapters and view video lectures BEFORE class to be prepared to understand the additional information presented during lecture and to participate fully in classroom activities. Quizzes, Interactive Activities and Davis Participation Activities are located under the appropriate Modules. Exam blueprints will be posted under the designated course module one week before each exam. Students are responsible for completion of assignments on the due dates noted on the course calendar.

Plug-ins and Helper Applications:

UT Tyler online courses use Java, JavaScript, browser plug-ins, helper application and cookies. It is essential that you have these elements installed and enabled in your web browser for optimal viewing of the content and functions of your online course content. Lecture videos are optimally viewed in high definition.

- Canvas – runs in Firefox or Chrome browser only
- Adobe Reader allows you to view, save, and print Portable Document Format (PDF) files. http://get.adobe.com/reader/
- Java Runtime Environment (JRE) allows you to use interactive tools on the web. http://www.java.com/en/download/
- Adobe Flash Player allows you to view content created with Flash such as interactive web applications and animations. http://get.adobe.com/flashplayer/
- QuickTime allows users to play back audio and video files. http://www.apple.com/quicktime/download/

General Policies

These policies apply to all students of the university. Students should access and review these policies at: http://www.uttyler.edu/academicaffairs/files/syllabuspolicy.pdf

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link:
http://www.uttyler.edu/wellness/rightsresponsibilities.php

Student Accessibility and Resources

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University of Texas at Tyler offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or you have a history of modifications or accommodations in a previous educational environment, you are encouraged to visit https://hood.accessiblelearning.com/UTTyler and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with Cynthia Lowery, Assistant Director of Student Services/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at http://www.uttyler.edu/disabilityservices, the SAR office located in the University Center, # 3150 or call 903.566.7079. **Students should inquire about accommodations before the first exam.**

UT Tyler Honor Code

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Campus Carry

We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at http://www.uttyler.edu/about/campus-carry/index.php

UT Tyler a Tobacco-Free University

NO forms of tobacco **are permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler.** This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors.
Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products.
There are several cessation programs available to students looking to quit smoking, including counseling, quit lines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

Grade Replacement/Forgiveness and Census Date Policies
Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) **on or before the Census Date of the semester in which the course will be repeated.** Grade Replacement Contracts are available in the Enrollment Services Center or at http://www.uttyler.edu/registrar. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.
Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.
The Census Date is the deadline for many forms and enrollment actions of which students need to be aware of. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment
- Completing the process for tuition exemptions or waivers through Financial Aid

State-Mandated Course Drop Policy
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).
Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions. The last day to drop a course during the Spring 2019 semester is April 1, 2019

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Student Standards of Academic Conduct

Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. "Cheating" includes, but is not limited to:

- copying from another student's test paper;
- using, during a test, materials not authorized by the person giving the test;
- failure to comply with instructions given by the person administering the test;
- possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;
- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructors has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
- paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
- falsifying research data, laboratory reports, and/or other academic work offered for credit;
- taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
- misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.

"Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the submission of it as one's own academic work offered for credit.

"Collusion" includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

All written work that is submitted will be subject to review for plagiarism by software TurnitIn TM, available in Canvas

UT Tyler Resources for Students

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu
- UT Counseling Center (903-566-7254)

UT Tyler Judicial Affairs and Scholastic Dishonesty
UT Tyler Honor Code: I embrace honor and integrity. Therefore, I choose not to lie, cheat, or steal, nor to accept the actions of those who do.
It is the student's responsibility to abide by and be aware of The University of Texas at Tyler's academic dishonesty policies: http://www.uttyler.edu/judicialaffairs/scholasticdishonesty.php
See http://www.uttyler.edu/mopp/documents/8-student-conduct-discipline.pdf
For Chapter 8 Student Conduct and Discipline

Repeating a Course
Students repeating a course may not use previously submitted assignments in the current course or previous courses nor utilize the same patients for an assignment. Submitting the same or slightly modified assignments from previous semesters is considered self-plagiarism and is subject to academic discipline, including failing the assignment or the course.

Student Affirmation, Social Media Policy—Documentation of Compliance
All students are required to read and complete the Student Forms quiz. The quiz affirms students have read and understand the Student Affirmation and Social Media Policy. Failure to complete the Student Forms quiz will result in an "Incomplete" grade for the course.

GRADING POLICIES

1. The simple average of the exam grades before weighted calculation is performed, must be 75% (C) or above to pass the course. Exam grades will not be rounded when calculating the average (74.5 -74.9 is not rounded to 75). Students with an exam average of 75 or higher will have final course grades calculated based on the weighted calculation of the exams, quizzes and other required course work.

2. 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.

3. Students with an exam grade average of 75% or higher will have the final course grade calculated using the weighted values of all graded work. Students who do not attain an exam grade average of 75% will not receive credit for other graded course work and the final grade will be based on the simple average of the course exams.

4. The weighted values of course work are as follows:

Grade Calculation

4 classroom exams—17% each	68%
Final Exam	17%
Check for Understanding Quizzes	10%
Interactive Activities	5%
	100%

Grades will be assigned according to the following scale in accordance with UTT School of Nursing Policy:

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

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

5. Module quizzes are taken in Canvas using a secured lockdown browser. The lockdown browser is downloaded through Canvas when the first quiz is taken. Students are able to see the questions missed and the correct response at the end of the quiz. Each quiz will be worth 10 points. Quizzes will open and close in accordance with the course schedule (see course schedule for each campus). Failure to complete the quiz within this time frame will result in 0 points for that quiz. It is recommended that the student take the quizzes on campus or on a laptop to avoid technical difficulties. The UTT IT department recommends using Firefox or Chrome for Canvas. Class notes and textbooks may be used for the weekly on-line quizzes. Quiz grades will be calculated into the course final grade only after a simple average of 75% is attained on classroom exams.
6. Interactive Assignments - Weekly interactive learning activities are assigned for each module. The activities are located on the FA Davis Advantage website. Students MUST use the access code located inside the cover of the textbook or the access code purchased online from FA Davis to set up an account with FA Davis and to access the assignment content. Student access instructions for the website are posted in Canvas. See the course schedule for assignment due dates. Each interactive activity grade is calculated as the percent of activity completion. Interactive activity assignment grades will be calculated into the course final grade only after a simple average of 75% is attained on the exams.

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 exam with an acceptable reason.
3. Students will not be allowed entry into the computer lab after the exam has started unless prior notification and arrangements have been made with the faculty.
4. ALL exams will be administered using Examplify software in the UTT School of Nursing Computer Lab on each campus. Students should be seated at the computer 10" prior to the exam start time.
5. Students will be able to review exam responses, the correct response and rationale immediately after completing the exam in Examplify.
6. All hats/caps must be removed during exam time. All personal items such as purses, books, backpacks, notebooks and briefcases and electronic watches will be left in the front or back of the room during testing. *Cell phones must be turned off*. Cell phones and smart watches will be left in backpacks or purses at the back of the classroom.
7. Silence will be enforced in the classroom before and during testing. No one will be permitted to leave the room during the testing time.
8. Make-up exams will be given only 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 the exam begins will result in a grade of 0 for that particular exam. Make up exams must be scheduled with faculty on the specific campus. Arrangements will be made on an individual basis for completion of exam requirements.

9. Students are allowed to review the correct response to exam items answered incorrectly immediately upon completion of the exam using Examplify. An individual exam review with faculty may be

scheduled with faculty during office hours and within 10 school days from the entry of grades. After this timeframe, exams are no longer available.

10. No review of exam content will be conducted during class. Discussion of content covered on the exam may be reviewed with the class at the discretion of the faculty. Absolutely NO recording, writing or replication of an exam is allowed.
11. Students who score below 75 on an exam are encouraged to schedule a coaching appointment with the faculty member on that campus within 1 week after grades are posted and are encouraged to meet with NURS 3303 tutors in the Testing Center

Testing Policy

Test integrity is a very important part of the nursing program to assess student knowledge, retention and preparation for the NCLEX and practice. Excessive student absences on test days threaten test integrity. The following process for course examinations will be followed within each nursing course.

1. Students who miss two or more exams due to illness will be required to provide a written statement from their physician. (Students with significant extenuating circumstances are encouraged to communicate with the course faculty member at least 24 business hours before the exam.)
2. Make up exam dates and times are at the discretion of the faculty.
3. Students are responsible for monitoring and acknowledging emails posted in Canvas or via student patriot account from faculty regarding makeup date, time and location details. Failure to "see" an email is not an acceptable excuse

   Tyler, Longview and Palestine make up exams will be scheduled depending on availability of the computer lab and faculty schedule.
4. If a student does NOT show up for a makeup exam on the designated date and time, the student will receive a zero grade for the exam.

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 assigned materials prior to class time and prepared for interactive discussion based on the learning objectives.
3. Participation in classroom learning activities will focus on application of concepts presented in the required reading.
4. Students are responsible for all course assignments and content, including announcements posted in Canvas.
5. Lecture outlines will be posted in Canvas for each module a minimum of two (2) working days prior to class. The majority of the outlines will be available at the beginning of the semester.
6. All submitted written material (papers, assignments, examinations, etc.) are the property of the School of Nursing. Documents will be maintained in an archived file at the School 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 School 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 School of Nursing.
3. Plagiarism, cheating and collusion are unacceptable, and, if a student is found violating any of these standards, the student will be disciplined accordingly.
4. The School 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 School 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.
Classroom: Casual or everyday business wear is recommended. This dress 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.

Module Objectives:

** Follow the Course Class Schedule in Canvas for quiz and assignment due dates

Cell Biology Review

Module 1 Objectives	Outline	Preparation and Evaluation
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.	1. Cell function a. all cells b. specialized 2. Cell Components a. structures b. functions 3. Cell Membrane a. control b. communication c. conductivity 4. Tissues and Organs a. epithelial b. connective c. muscular d. nerve	READ: Capriotti, Chapter 1 Evaluation: Quiz 1 Exam 1

Cellular Adaptation

Module 1 Objectives	Outline	Preparation and Evaluation
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.	1. Cell Adaptation a. healthy b. pathologic 2. Cell Damage Mechanisms a. hypoxia b. free radicals c. physical injury 3. Necrosis a. liquification b. coagulative c. caseous d. infarction e. gangrene 4. Apoptosis and aging	READ: Capriotti, Chapter 1, 2 Evaluation: Quiz 1 Exam 1

Fluid, Electrolyte and Acid Base Balance

Module 1 Objectives	Outline	Preparation and Evaluation
1. Explain the movement of water between body compartments. 2. Describe the mechanism of edema. 3. Discuss the causes and effects of dehydration	1. Body Water a. compartments b. movement 1. mechanisms 2. controls c. Edema 1. mechanism 2. consequences	READ: Capriotti, Chapter 7,8 Evaluation: Quiz 2 Exam 1

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.	d. Dehydration 1. mechanism 2. consequences 2. Electrolytes a. Sodium 1. function 2. hyponatremia 3. hypernatremia b. Potassium 1. function 2. hypokalemia 3. hyperkalemia c. Calcium 1. function 2. hypocalcemia 3. hypercalcemia d. Phosphorus 1. function 2. relationship with calcium 3. Acid- Base Balance a. compensatory mechanisms b. acidosis 1. respiratory 2. metabolic c. alkalosis 1. respiratory 2. metabolic d. compensation	

Inflammation, Healing and Infection

Module 2 Objectives	Outline	Preparation and Evaluation
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.	1. Normal Defenses 2. Inflammatory Process a. Chemical mediators b. Cellular responses c. Capillary responses d. Signs and Symptoms 1. local 2. systemic 3. Healing a. Types b. Process c. Scar tissue 1. function 2. complications 4. Infection	READ: Capriotti, Chapter 9,10 Assignment: Quiz 2 Evaluation: Quiz 2 Exam 1

Congenital and Genetic Disorders

Module 3 Objectives	Outline	Preparation and Evaluation
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.	1) Genetic Building Blocks a) DNA b) Chromosomes c) Genes 2) Principles of predication a) Autosomal dominant b) Autosomal recessive c) X- linked 3) Chromosomal abnormality a) Downs syndrome 4) Gene abnormality a) Duchenne's Muscular Dystrophy 5) Human Genome Project	READ: Capriotti, Chapter 3 Evaluation: Quiz 3 Exam 2

Immune and Abnormal Responses

Module 4 Objectives	Outline	Preparation and Evaluation
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.	1. Immune Response a. Cell mediated b. Humoral 2. Immunity a. Acquisition b. Types 1. I – hay fever 2. II – Blood incompatibility 3. III – Autoimmune Disorders 4. IV – transplant rejection 3. Immunodeficiency a. Causes b. Effects c. HIV- AIDS 1. course 2. effects 3. complications	READ: Capriotti, Chapter 11 Evaluation: Quiz 3 Exam 2

Neoplasms

Module 5 Objectives	Outline	Preparation and Evaluation
1. Define "cancer" in terms of abnormal tissue growth, cell types of origin and benign vs. malignant tumor properties.	1) Cancer characteristics a) Cell abnormalities b) Tumor properties i) Benign	READ: Capriotti, Chapter 40

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.	ii) Metastatic 2) Categorizing Cancers a) staging b) grading c) prognosis 3) Risk Factors a) Viral b) Bacterial c) Environmental 4) Clinical Manifestations	Evaluation: Quiz 4 Exam 2

Blood and Lymphatic Disorders

Module 5 Objectives	Outline	Preparation and Evaluation
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.	1) Blood Characteristics a) Red blood cells b) White blood cells c) Platelets d) plasma 2) Problems of red blood cells a) Iron deficiency anemia b) Pernicious anemia c) Sickle Cell anemia 3) Problems of white blood cells a) leukemia 4) Problems with platelets a) Thrombocytopenia	READ: Capriotti, Chapter 12, 13, 14 Evaluation: Quiz 4 Exam 2

Renal/Urinary Disorders

Module 6 Objectives	Outline	Preparation and Evaluation
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.	1) Inflammatory Problems a) Kidney i) nephritis b) bladder i) UTI 2) Blockage of system a) calculi b) Benign Prostatic Hypertrophy c) Prostatic cancer 3) Failure a) bacterial b) viral	READ: Capriotti, Chapter 22, 23 Evaluation Quiz 5 Exam 3

	4) Other functions a) hematopoiesis **b)** blood pressure	

Cardiovascular Disorders

Module 7 & 8 Objectives	Outline	Preparation and Evaluation
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 dysrythmias 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.	1) Alterations of flow a) Principles b) Atherosclerosis c) Ischemia vs. infarction d) Aneurysm e) Hypertension f) Venous flow i) Varicose Veins ii) Deep Vein Thrombosis 2) Alterations in Pump a) principles b) impulse conduction c) structural defects i) valves ii) congenital defects d) pump failure i) left sided ii) right sided e) cardiomyopathy f) restriction 3) Shock a) processes b) origins i) cardiogenic ii) hypovolemic iii) neurogenic **iv)** septic	READ: Capriotti, Chapters 15, 16, 17, 18, 19, 47 Evaluation: Quiz 5 & 6 Exam 3

Reproductive Disorders

Module 9 Objectives	Outline	Preparation and Evaluation
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	1) Female Reproductive Problems a) Pelvic Inflammatory Disease b) endometriosis c) Cancers i) Cervical ii) ovarian iii) breast 2) Male Reproductive Problems a) Benign Prostatic Hypertrophy b) Prostatic cancer	READ: Capriotti, Chapter 26, 27, 28, Assignment: Quiz 7 Exam 3

prostate cancer as it relates to male reproductive function. 5. Compare and contrast common sexually transmitted diseases.	3) Sexually Transmitted Diseases a) bacterial b) viral	

Skin Disorders

Module 9 Objectives	Outline	Preparation and Evaluation
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.	1. Anatomy of Skin a. Structure b. Function 2. Inflammation a. Processes and Effects b. Common lesions 3. Cancers a. Causes and effects b. Conditions 1. Basal cell 2. Squamous Cell 3. Melanoma 4. Thermal Injuries a. Causes b. Degree 1. Partial Thickness 2. Deep Partial Thickness 3. Full Thickness c. Effects 1. Shock 2. Pain 3. Infection	READ: Capriotti, Chapters 41, 42 Evaluation: Quiz 7 Exam 3

Musculoskeletal Disorders

Module 10 Objectives	Outline	Preparation and Evaluation
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.	1) Structure and Function a) Bones b) Joints c) Muscles 2) Bones and Joints a) Fractures b) Degenerative Bones and Joints i) Osteoporosis ii) Osteoarthritis iii) Rheumatoid Arthritis iv) Gout 3) Muscles a) Fibromyalgia	READ: Capriotti, Chapter 37, 38, 39 Evaluation: Quiz 8 Exam 4

Acute Neurological Disorders

Module 11 Objectives	Outline	Preparation and Evaluation
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.	1) Increased Intracranial Pressure a) causes i) brain trauma ii) space occupying lesions iii) hemorrhage iv) edema b) compensatory mechanisms c) manifestations of ICP i) early ii) late 2) Cranial blood flow a) Cerebral Vascular Accident 3) Spinal Cord Injuries a) partial b) transaction c) neurogenic shock	READ: Capriotti, Chapters 33, 34, 35, 36 (acute and chronic) Evaluation: Quiz 8 Exam 3

Chronic Neurological Disorders

Module 12 Objectives	Outline	Preparation and Evaluation
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.	1) Seizure Disorders a) Risk Factors b) Neurologic alterations c) Characteristics 2) Dementias a) Neurologic manifestations b) Phases i) Early ii) late 3) Chronic Neuromuscular Disorders a) Neurotransmitters i) Parkinson's b) Nerve degeneration **i)** Multiple Sclerosis	READ: Capriotti, Chapter 33, 34, 35, 36 Evaluation: Quiz 8 Exam 4

Pain

Module 12 Objectives	Outline	Preparation and Evaluation
1. Explore concepts of pain perception, modulation and clinical manifestations.	1) Pain a) transmission i) reflex arcs ii) sensory tracts b) Interpretation 2) manifestations	READ: Capriotti, Chapter 6 Evaluation: Quiz 8 Exam 4

Respiratory Disorders

Module13 Objectives	Outline	Preparation and Evaluation
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.	1. Controls a. Thoracic mechanics b. Chemical controls 2. Inflammation a. Processes and Effects b. Conditions 1. Asthma 2. Pneumonia 3. Tuberculosis 4. Lung Cancer 3. Mechanical Alterations a. Causes and effects b. Conditions 1. Pneumothorax 2. Chest wall trauma 4. Gas Exchange Alterations a. Causes and Effects b. Conditions 1. Cystic Fibrosis 2. Chronic Bronchitis 3. Emphysema 4. Pulmonary Edema 5. Blood Flow Alterations a. Causes and effects b. Conditions 1. Pulmonary Embolus 2. Pulmonary Hypertension	READ: Capriotti, Chapter 20, 21 Evaluation: Quiz 9 Exam 4

Endocrine Disorders

Module 14 Objectives	Outline	Preparation and Evaluation
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	4) Hormonal control a) Feedback loops b) Target cell receptors 5) Pancreas - Insulin a) Diabetes Mellitus, type 1 b) Diabetes Mellitus, type 2 c) Complications 6) Pituitary – Antidiuretic Hormone a) SIADH b) Diabetes Insipidus 7) Thyroid – thyroxine a) Hyperthyroid (Graves) b) Hypothyroid (Myxedema) 8) Adrenal -	READ: Capriotti, Chapter 24. 25 Evaluation Quiz 10 Exam 5 Final

when levels are altered. 7. Discuss the functions of aldosterone on body functions.	a) Corticosteroids i) Too much ii) Too Little b) Aldosterone i) Too much ii) Too little	

Digestive System Disorders

Module 15 Objectives	Outline	Preparation and Evaluation
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 inflammatory bowel diseases-- ulcerative colitis and Crohn's disease—and diverticular disease. 5. Discuss the similarities and differences between acute and chronic pancreatitis. 6. Discuss the pathophysiologic alterations that occur with liver failure.	1) Conditions of Upper Gastrointestinal System a) Gastroesophageal Reflux (GERD) b) Peptic Ulcer Disease (PUD) c) Gastroenteritis (a) Bacterial (b) viral 2) Conditions of Lower Gastrointestinal System a) Inflammatory Bowel Disease b) Diverticulosis c) Bowel Obstruction 3) Conditions of Accessory Organs a) Liver i) Hepatitis ii) Cirrhosis iii) Failure b) Pancreatitis c) Cholecystitis	READ: Capriotti, Chapter 29, 30, 31, 32 Evaluation: Quiz 11 Exam 5 Final

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