

DMS A161: PATHOPHYSIOLOGY

Item	Value
Top Code	122700 - Diagnostic Medical Sonography
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

Specific study of pathophysiological mechanisms related to diagnostic medical sonography. PREREQUISITE: DMS A123. COREQUISITE: DMS A165. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Integrate and analyze knowledge of pathophysiology related to diagnostic medical sonography and differentiate between normal and abnormal sonographic findings.

Course Objectives

- 1. Describe pathophysiological concepts related the thyroid and parathyroid glands.
- 2. Describe pathophysiological concepts related to the male GU and scrotum.
- 3. Identify pathophysiological concepts related to the liver.
- 4. Describe pathophysiological concepts related to the gallbladder.
- 5. Describe pathophysiological concepts related to the pancreas.
- 6. Describe pathophysiological concepts related to the kidneys.
- 7. Identify pathophysiological concepts related to the urinary bladder.
- 8. Identify pathophysiological concepts related to the female and male breast.
- 9. Identify pathophysiological concepts related to the adrenals and retroperitoneum.
- 10. Discuss and describe altered cells, tissue biology, inflammation and neoplasms.

Lecture Content

Introduction Terminology Homeostasis Necrosis/Infection Necrosis Infection: Terminology Positive effects of inflammation Cardinal signs of inflammation Inflammation/Neoplasm Inflammation Terminology Positive effects of inflammation Cardinal signs of inflammation Neoplasms Terminology Neoplastic transformations Benign vs. malignant tumors Effects of neoplasms on host Pathogenesis of cancer Grading and staging of tumors Fibrocystic (Benign) Changes/ Breast Cancer Fibrocystic changes Fibrocystic changes Epithelial hyperplasia Mastitis Gynecomastia Fibroadenoma Breast cancer Statistical correlates, hormonal influences, signs and symptoms, routes of metastasis Non-infiltrating intraductal carcinoma Infiltrating

intraductal carcinomas Non-infiltrating lobular carcinomas Infiltrating lobular carcinoma Staging and grading Sonographic appearance of abnormalities Liver diseases Liver diseases: metabolic malfunctions Review of liver anatomy and physiology Jaundice Liver failure Disorders of bilirubin metabolism Cholangitis and liver abscess Hepatitis Liver diseases Alcoholic Biliary Portal hypertension Liver diseases: cysts and abscesses Congenital cysts Echinococcal cysts Abscesses Obstructions: intrahepatic vs. extrahepatic Liver diseases: Cancer Hepatocellular carcinoma Metastatic carcinomas Gallbladder Diseases Cholecystitis Cholelithiasis Carcinoma of the gallbladder Kidney/Pancreatic Diseases Renal cystic diseases Hydronephrosis Solid renal tumors Pancreatitis: acute and chronic Pancreatic cancer Islet cell tumors Endocrine Disorders A. Thyroid and parathyroid B. Thyroid and parathyroid nodules IX. Male GU and Scrotal diseases

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)

Instructional Techniques

Lecture, discussion, YouTube videos and PowerPoint presentations.

Reading Assignments

The student will be required to read chapters in the textbook as well as review lecture notes. This will be 5 hours per week.

Writing Assignments

Students will demonstrate writing proficiency on exams and by writing 4 short papers relevant to the topics discussed in lecture.

Out-of-class Assignments

Students will be completing 4 short papers relevant to pathophysiology during the semester. This is approximately 2 hours per week to research, write and prepare final paper.

Demonstration of Critical Thinking

Quizzes; objective tests; demonstration of problem solving skills by participation in classroom discussions and exercises; writing skill evaluation; final examination.

Required Writing, Problem Solving, Skills Demonstration

Students will demonstrate writing proficiency by writing four short papers relevant to the topics discussed in class. Some quizzes require short answers.

Eligible Disciplines

Diagnostic medical technology-diagnostic medical sonography, neurodiagnosti...: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Huether, S., McCance, K. Understanding Pathophysiology, 6th ed. Mosby, 2017