

SON 1113 ULTRASOUND PHYSICS AND INSTRUMENTATION I

A course in the physics and instrumentation of ultrasound which will cover ultrasonic wave generation and propagation, interaction of sound and matter, transducer and instrumentation designs, ultrasound scanning modes, image artifacts and quality, Doppler effect and Doppler instrumentation components.

SON 1123 CARDIOVASCULAR CONCEPTS I

A study of anatomy, physiology and pathophysiology of the cardiovascular system. Focuses on cardiac and vascular structural anatomy and relationships, electrical innervation, embryology and hemodynamics of the heart and vascular system. Pathophysiology concepts, including etiology, pathology, signs, symptoms, risk factors and treatment of cardiovascular diseases, are also presented.

SON 1133 ECHOCARDIOGRAPHY I

Emphasis on basic cardiac anatomy imaging techniques and principles. Topics include basic imaging protocols, scan planes in relation to cardiac anatomy and principles of acquisition of diagnostic images.

SON 1213 PHYSICS & INSTRUMENTATION II

Continuation of son 1113 physics & instrumentation i. A course in the physics and instrumentation of ultrasound which will cover ultrasonic wave generation and propagation, interaction of sound and matter, transducer and instrumentation designs, ultrasound scanning modes, image artifacts and quality, doppler effect and doppler instrumentation components. Prerequisites: Son 1113

SON 1253 CLINICAL EXPERIENCE I

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers

SON 2014 ECHOCARDIOGRAPHY II

An emphasis on adult acquired cardiac pathologies. Topics include cardiovascular pathophysiology; quantitative measurements and the application of 2-D, M-Mode and Doppler. Recognition of the sonographic appearances of cardiovascular disease is stressed. Prerequisite: SON 1133.

SON 2023 ECHOCARDIOGRAPHY III

Instruction in advanced echocardiographic procedures. Topics include stress echo, related diagnostic imaging and related noninvasive cardiac testing.

SON 2134 ECHOCARDIOGRAPHY IV

A continuation of Echocardiography III with emphasis on cardiac disease. A discussion of quantitative measurements and application of 2-D, M-Mode, Doppler and recognition of the sonographic appearances of cardiac disease is stressed. Prerequisite: SON 2023.

SON 2253 CLINICAL EXPERIENCE II

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 1253.

SON 2323 CARDIOVASCULAR CONCEPTS II

A continuation from SON 1123 Cardiovascular Concepts I. A study of anatomy, physiology and pathophysiology of the cardiovascular system. Focuses on cardiac and vascular structural anatomy and relationships, electrical innervation, embryology and hemodynamics of the heart and vascular system. Pathophysiology concepts, including etiology, pathology, signs, symptoms, risk factors and treatment of cardiovascular diseases are also presented. Prerequisite SON 1123.

SON 2333 CARDIOVASCULAR CONCEPTS III

A continuation from SON 2323 Cardiovascular Concepts II. A study of anatomy, physiology and pathophysiology of the cardiovascular system. Focuses on cardiac and vascular structural anatomy and relationships, electrical innervation, embryology and hemodynamics of the heart and vascular system. Pathophysiology concepts, including etiology, pathology, signs, symptoms, risk factors and treatment of cardiovascular diseases are also presented. Prerequisite SON 2323.

SON 2353 CLINICAL EXPERIENCE III

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 2253.

SON 2453 CLINICAL EXPERIENCE IV

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 2353.

BIOL 1012 BIOLOGICAL AND MEDICAL TERMINOLOGY

Introduction to the use of Latin and Greek common roots, stems and combining forms in structuring biological and medical terminology. Prerequisites: [R] [Sci] MATH 0104

BIOL 1214 HUMAN ANATOMY

Morphology of the human body and its systems. Laboratory includes dissection and study of the human cadaver. Prerequisite: [R] [SCI] Math 0104.

PSIO 2314 HUMAN PHYSIOLOGY

Structure and function of the systems of the human body. Lab: three hours per week. Pre-requisite: CHEM 1214 or CHEM 1314.

