

DMS 208 : Sonographic Physics and Instrumentation

This course will cover the basic acoustical physics and waves in human tissue with an emphasis on ultrasound transmission in soft tissues, attenuation of sound energy, parameters affecting sound transmission, and resolution of sound beams. Design and performance of transducers, pulse-echo imaging equipment, and Doppler and color flow equipment. The physics leading to image artifacts is described, as are methods for evaluating performance of ultrasound devices. Finally, acoustical exposure measurements and levels from diagnostic equipment are discussed, as well as biological effects and risk.

Credits 3

Prerequisites

All previously required and concurrent courses per the academic plan or with consent of the faculty.