

# DIAGNOSTIC MEDICAL SONOGRAPHY (DMSO)

## Courses

### **DMSO 400L Introduction to Cardiac Sonography Laboratory 1 Credit**

Introduction to cardiac sonography procedures. The topics of exam room set-up, patient preparation and education, and body ergonomics will be explored. Various echocardiography settings and their influence on a sonographer's approach and preparation will be discussed.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Terms Typically Offered:** Summer.

### **DMSO 409 Sonography Clinical Experience I 11 Credits**

Introduction to sonography clinical education in the clinical environment. The course provides hands-on training in performing sonographic procedures, providing patient care, assessment, and clinical safety.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 410 and DMSO 411.

**Terms Typically Offered:** Fall.

### **DMSO 410 Sonography Principles and Instrumentation I 2 Credits**

Introduction to the physical principles of ultrasound in diagnostic medical sonography. Analysis of the interaction of ultrasound and matter, the operation of the transducers, and the Doppler concepts. Skills associated with image acquisition and optimization will be developed.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 409 and DMSO 411.

**Terms Typically Offered:** Fall.

### **DMSO 411 Cardiac Sonography Procedures I 2 Credits**

Introduction to sonography of the heart. The topics of basic embryology, anatomy, physiology, conduction system, and great vessels will be explored. Basic scanning positions, techniques, image protocols, and modes will be discussed. Principles of hemodynamics, cardiac cycle, ventricular function for a normal heart, and abnormal pathology.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 409 and DMSO 410.

**Terms Typically Offered:** Fall.

### **DMSO 419 Sonography Clinical Experience II 2 Credits**

Exploration of sonography clinical education in the clinical environment.

The course provides hands-on training in performing sonographic procedures, providing competent patient care, assessment, and clinical safety.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 420, DMSO 421, and DMSO 429.

**Terms Typically Offered:** Spring.

### **DMSO 420 Sonography Principles and Instrumentation II 1 Credit**

Study of the physical principles of ultrasound in diagnostic medical sonography. Analysis of the advanced scanning techniques, image artifacts, and processing. Skills associated with image optimization and quality assurance will be developed.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 419, DMSO 421, and DMSO 429.

**Terms Typically Offered:** Spring.

### **DMSO 421 Cardiac Sonography Procedures II 3 Credits**

Introduction to advanced cardiac sonography procedures. Topics of transesophageal echocardiograms, treadmill, bicycle, pharmacological stress echograms, intracardiac imaging, structural heart interventions, cardiac surgeries, and common adult congenital deformities will be explored. Criteria, protocols, scanning requirements, measurements, and quantifications will be analyzed for each procedure.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 419, DMSO 420, and DMSO 429.

**Terms Typically Offered:** Spring.

### **DMSO 429 Sonography Clinical Experience III 12 Credits**

Advancement of sonography clinical education in the clinical environment. The course provides hands-on training in performing sonographic procedures, providing patient care, assessment, and clinical safety.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 419, DMSO 420, and DMSO 421.

**Terms Typically Offered:** Spring.

### **DMSO 430 Sonography Registry Review 2 Credits**

Synthesis of diagnostic medical sonography concepts, principles, and procedures. The course includes preparation for the national certification examinations.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 439.

**Terms Typically Offered:** Summer.

### **DMSO 439 Sonography Clinical Experience IV 9 Credits**

Demonstration of competency in the sonography clinical education.

The course provides hands-on training in performing sonographic procedures with a higher level of autonomy, providing advanced patient care, assessment, and clinical safety.

**Prerequisites:** Admission to Diagnostic Medical Sonography Program.

**Corequisites:** DMSO 430.

**Terms Typically Offered:** Summer.