

# DIAGNOSTIC MEDICAL SONOGRAPHY

## Programs

- Diagnostic Medical Sonography Associate in Applied Science (<https://catalog.gvltec.edu/school-health-sciences/diagnostic-medical-sonography/diagnostic-medical-sonography-aas/>)

## Courses

### DMS 101 Ultrasound Physics and Instrumentation I (2-0-2)

*Offered Fall Semester*

Prerequisite: MAT 109 or MAT 110 or higher

Co-requisites: DMS 104, DMS 105, DMS 117, DMS 164

This course is a study of fundamental principles of acoustic physics including sound waves, sound wave propagation, sound wave interactions, image production, ultrasound transducers, transducer arrays, transducer operation, imaging modes and biological effects.

### DMS 102 Ultrasound Physics and Instrumentation II (3-0-3)

*Offered Spring Semester*

Prerequisites: DMS 101, DMS 104, DMS 105, DMS 117, DMS 164

Co-requisites: DMS 116, DMS 119, DMS 165

This course is an advanced study of the fundamental principles of acoustic physics and ultrasound instrumentation to include a discussion of the major components of the ultrasound system, Doppler, spectral analysis, color-flow Doppler, color Doppler energy, ultrasound artifacts, quality assurance and new technology.

### DMS 104 Patient Care for Sonography (1-3-2)

*Offered Fall Semester*

Prerequisite: ENG 101

Co-requisites: DMS 101, DMS 105, DMS 117, DMS 164

This course is a study of the techniques of proper patient care, including communication, patient assessment, infection control, patient confidentiality, cultural diversity, body mechanics and other skills required within a sonographic lab.

### DMS 105 Sonographic Anatomy of the Abdomen (3-3-4)

*Offered Fall Semester*

Co-requisites: DMS 101, DMS 104, DMS 117, DMS 164

This course is a study of the abdominal structures with emphasis on sonographic imaging methods and procedures.

### DMS 116 Abdominal Ultrasound (3-3-4)

*Offered Spring Semester*

Prerequisites: DMS 101, DMS 104, DMS 105, DMS 117, DMS 164

Co-requisites: DMS 102, DMS 119, DMS 165

This course is an in-depth study of abdominal ultrasound including anatomy, physiology and pathology. The sonographic appearance of normal anatomical structures and the more common abnormalities affecting the abdomen are also discussed. Emphasis is placed on the interpretation of clinical tests and basic scanning techniques relative to the development of a differential diagnosis.

### DMS 117 Gynecology (2-0-2)

*Offered Fall Semester*

Co-requisites: DMS 101, DMS 104, DMS 105, DMS 164

This course is the study of anatomy, physiology and pathology of the female reproductive system with emphasis on sonographic imaging methods and procedures.

### DMS 119 Embryology and First Trimester Ultrasound (2-0-2)

*Offered Spring Semester*

Prerequisites: DMS 101, DMS 104, DMS 105, DMS 117, DMS 164

Co-requisites: DMS 102, DMS 116, DMS 165

This course is the study of anatomy, physiology and pathology associated with first-trimester ultrasound, including an in-depth study of the reproductive process with emphasis on sonographic imaging methods and procedures.

### DMS 124 OB/GYN Sonography II (2-0-2)

*Offered Fall Semester*

Prerequisites: DMS 130, DMS 166

Co-requisites: DMS 167, DMS 200

This course is an advanced study of the gynecological pathologic processes, including fetal anomalies/abnormalities and advanced fetal gestational age testing.

### DMS 130 Selected Topics in Sonography (2-0-2)

*Offered Summer Semester*

Prerequisites: DMS 102, DMS 116, DMS 119, DMS 165

Co-requisites: DMS 166

This course is a study of thyroid, breast, testicular and other superficial structures of the body by ultrasound with emphasis on anatomy, physiology and pathological conditions associated with these organs.

### DMS 164 Introduction to Clinical Education (0-6-2)

*Offered Fall Semester*

Co-requisites: DMS 101, DMS 104, DMS 105, DMS 117,

This course is a supervised clinical experience and practice designed to introduce the student to the Diagnostic Ultrasound Department.

### DMS 165 Clinical Education II (0-24-8)

*Offered Spring Semester*

Prerequisites: DMS 101, DMS 104, DMS 105, DMS 117, DMS 164

Co-requisites: DMS 102, DMS 116, DMS 119

This course is a supervised clinical experience and practice designed to continue the student's development of ultrasound scanning skills and techniques.

### DMS 166 Advanced Clinical Education (0-21-7)

*Offered Summer Semester*

Prerequisites: DMS 102, DMS 116, DMS 119, DMS 165

Co-requisites: DMS 130

This course is supervised clinical experience and practice designed to continue and advance the student's ultrasound scanning skills and techniques.

### DMS 167 Imaging Practicum (0-24-8)

*Offered Fall Semester*

Prerequisites: DMS 130, DMS 166

Co-requisites: DMS 124, DMS 200

This course is supervised clinical experience and practice designed to continue and advance the student's ultrasound scanning skills and techniques. This clinical course also provides an opportunity for students to explore advancements in Sonography.

### DMS 200 Seminars in Sonography (2-0-2)

*Offered Fall Semester*

Prerequisites: DMS 166

Co-requisites: DMS 124, DMS 167

This course is an in-depth review of ultrasound physics, anatomy, physiology and pathology and provides test preparation for the national certification exams. Emphasis is placed on the interpretation of clinical tests and scanning techniques relative to the development of a differential diagnosis.