

# DIAGNOSTIC MEDICAL SONOGRAPHY (DMS)

---

## **DMS 100 Introduction to Ultrasound 1 credit**

This course is an introduction to ultrasound basics. It will include a fundamental study of cross-sectional anatomy as it relates to ultrasound imaging, as well as basic scanning principles and ultrasound machine technology. An introduction to ultrasound terminology will also be presented. This course will assist students in beginning to build strong conceptual and scanning skills. (Co-requisites: BIO115, PHY112, MAT165, and ENG120).

## **DMS 105 Ultrasound Physics 4 credits**

This course establishes the foundation for the understanding of physics of sonography and its impact on interpreting data as well as ultrasound physics principles, hemodynamics, bioeffects, and quality assurance. (Prerequisites: BIO117, PHY112, MAT165, ENG120, and DMS100; Co-requisites: DMS120, DMS135, and BIO350).

## **DMS 110 Abdominal I 3 credits**

This course is an introduction to abdominal ultrasound with an emphasis on the role of the diagnostic medical sonographer in practice. The student will have comprehensive discussions of cross-sectional anatomy, liver, and pathology. The student gains experience through participation in scanning labs. 80% is needed in this course to pass the lecture portion of this course. (Prerequisites: DMS120, DMS105, DMS135, and BIO350; Co-requisites: DMS140 and DMS155).

## **DMS 120 Gynecology I 2 credits**

This course establishes the basic foundation for the imaging technique and interpretation of the female pelvis. Pelvic anatomy, physiology, clinical indications for pelvic imaging, and imaging techniques will be covered in detail. The student gains experience through participation in scanning labs. (Prerequisites: BIO117, PHY112, MAT165, ENG120, and DMS100; Co-requisites: DMS105, DMS135, and BIO350).

## **DMS 130 Abdominal II 4 credits**

This course will provide the intermediate student with an understanding of the gallbladder, urinary system, pancreas, and spleen. This is a continuation of the skills and knowledge acquired in Abdominal I (DMS110). The student gains experience through participation in scanning labs. (Prerequisites: DMS110, DMS140, and DMS155; Co-requisites: DMS160 and DMS175).

## **DMS 135 Introduction to Vascular 2 credits**

This course is an introduction to the application of vascular ultrasonography. This course provides the basics of the vascular physical principles and instrumentation for pulse-wave and color Doppler. The student gains experience through participation in scanning labs. (Prerequisites: BIO117, PHY112, MAT165, ENG120, and DMS100; Co-requisites: DMS120, DMS105, and BIO350).

## **DMS 140 Ob/Gyn II 3 credits**

This course builds on the knowledge and skills taught in Gynecology I (DMS120). The student will have discussions on first and second trimester, as well as the normal fetal growth and development and fetal anomalies as it applies to the diagnostic medical sonographer. The student gains experience through participation in scanning labs. (Prerequisites: DMS120, DMS105, DMS135, and BIO350; Co-requisites: DMS110 and DMS155).

## **DMS 150 Small Parts 2 credits**

This course is a continuation of Abdominal II (DMS130), and provides the advanced student with comprehensive discussions on small parts anatomy, which includes the thyroid, breast, prostate, and scrotum. The student gains experience through participation in scanning labs. (Prerequisites: DMS130, DMS160, and DMS175; Co-requisites: DMS180).

## **DMS 155 Vascular I 3 credits**

This course builds on the knowledge and skills learned in Introduction to Vascular (DMS135). This course provides an in-depth study of the vascular structures in the human body, physical principles and instrumentation for color Doppler. Emphasis is placed on understanding anatomy, vascular physics, hemodynamics, and vascular disease. The student gains experience through participation in scanning labs. (Prerequisites: DMS120, DMS105, DMS135, and BIO350; Co-requisites: DMS110 and DMS140).

## **DMS 160 Ob/Gyn III 2 credits**

This course is a continuation of Gynecology I (DMS120) and Ob/Gyn II (DMS140), and provides the advanced student with comprehensive discussions in the third trimester, fetal anomalies, and biophysical profiles. The student gains experience through participation in scanning labs. (Prerequisites: DMS110, DMS140, and DMS155; Co-requisites: DMS130 and DMS175).

## **DMS 175 Vascular II 3 credits**

This course builds on the knowledge and skills taught in Introduction to Vascular (DMS135) and Vascular I (DMS155). This course provides the intermediate student with a more extensive understanding of vascular anatomy, carotid, and abdominal examinations. The student gains experience through participation in scanning labs. (Prerequisites: DMS110, DMS140, and DMS155; Co-requisites: DMS130 and DMS160).

## **DMS 180 Special Procedures and Patient Care 1 credit**

A study of interventional procedures is emphasized. Students will review ultrasound films and compose differential diagnoses. Students will research a disease and also enhance skills by using terminology related to sonography. The course introduces the student to basic concepts of patient care, including considerations for the physical and psychological needs of the patient and family. Routine and emergency patient care is discussed, as well as universal precautions. (Prerequisites: DMS130, DMS160, and DMS175; Co-requisites: DMS150).

## **DMS 200 Medical Law and Ethics 3 credits**

This course is designed to define the sources of law, causes of action, and litigation processes related to the professional practice of medical imaging. The interrelatedness of standards of care, law, ethical standards, and competence are examined, as are laws and regulations affecting the practitioner in employment and liability. The course is designed to establish a foundation for, and define the parameters of, professional practice. Ethical behaviors within a defined scope of practice will be discussed and examined within the context of the healthcare delivery system. (Prerequisites: Acceptance to the Diagnostic Medical Sonography Program, DMS 100).

## **DMS 250 Comprehensive Review, Diagnostic Medical Sonography 3 credits**

This course which integrates the range of skills and knowledge the student has gained in Vascular, Abdomen, and Ob/Gyn sonography. Course content will focus on Abdomen and Ob/Gyn with a comprehensive review of Lecture material learned in previous quarters. Students will complete an abdominal and pelvic proficiency. Final preparation for entry into clinical setting. (Prerequisites: DMS150 and DMS180).

**DMS 280 Clinical Training I 3 credits**

The student will demonstrate competency in the performance of ultrasound at clinical facilities. Entry-level employment competency will be attained. Clinical training occurs off-campus at an actual clinic, laboratory, or hospital approved by CSP. (Prerequisite: DMS250).

**DMS 290 Clinical Training II 6 credits**

The student will demonstrate competency in the performance of ultrasound at clinical facilities. Entry-level employment competency will be attained. Clinical training occurs off-campus at an actual clinic or hospital approved by CSP. (Prerequisite: DMS280).