

DIAGNOSTIC MEDICAL SONOGRAPHY (DMS)

DMS 200. Medical Law & Ethics. (3 Credits)

This course presents legal guidelines and requirements for health care, personal attributes, job readiness, workplace dynamics, and allied health professions and credentialing. It identifies the roles and functions of personnel within the medical setting. Medical ethics and bioethics are discussed as well as risk management issues as they relate to the practice of allied health professionals. Students will learn to identify and respond to issues of confidentiality, perform within legal and ethical boundaries, establish and maintain the medical record, and document appropriately.

DMS 301. Superficial Sonography. (2 Credits)

This course emphasizes the role of a diagnostic medical sonographer as it pertains to superficial sonography. This course will investigate embryology, development, and anatomy of the breast, thyroid, scrotum, prostate, and penis. Further evaluation of physiology, pathology and sonographic appearance of normal and abnormal superficial sonographic anatomy will be discussed. Correlation with laboratory values, other modalities, and instructional scan labs (dependent on model availability) will be included.

DMS 311. Sonographic Principles and Instrumentation I. (2 Credits)

This is the first in a series of courses in sonographic principles and instrumentations. The physics of ultrasound and its relation to instrumentation will be covered. Concepts of sound interaction with the human body are explored and the production of images discussed.

DMS 312. Sonographic Principles and Instrumentation II. (2 Credits)

This course continues the discussion of sonographic principles and instrumentation and the relationship between them. It focuses on instrumentation and the production of ultrasound images. The interaction of sound and the human body is discussed.

Prerequisite: DMS 311.

DMS 321. Vascular Sonography I. (3 Credits)

This course is intended to teach the student the anatomy, physiology and pathology of the cerebrovascular and visceral systems and to perform and analyze cerebrovascular and abdominal vascular exams.

DMS 322. Vascular Sonography II. (2 Credits)

This course prepares the student to perform peripheral venous testing and ultrasound. It explores the anatomy, physiology and pathology of the peripheral venous system. Scan labs will be integrated into the curriculum to provide hands-on skills.

Prerequisite: DMS 321.

DMS 323. Vascular Sonography III. (2 Credits)

This course prepares the student to perform peripheral arterial vascular ultrasound. It will include concepts of arterial hemodynamics as well as anatomy, physiology and pathology of the peripheral arterial vasculature. Scan labs will be integrated into the curriculum to provide hands-on skills.

Prerequisite: DMS 322.

DMS 331. Abdominal Sonography I. (4 Credits)

This course focuses on normal gross anatomy, cross-sectional anatomy, and relational anatomy of the abdominal cavities, abdominal vessels, liver, biliary, and pancreatic systems. Physiology, pathology and pathophysiology are emphasized. Related laboratory values and other imaging modalities are discussed. Lectures are correlated with scanning lab demonstrations.

DMS 332. Abdominal Sonography II. (3 Credits)

This course focuses on normal gross anatomy, cross-sectional anatomy, and relational anatomy of the urinary system, spleen and gastrointestinal system. Physiology, pathology and pathophysiology are emphasized. Related laboratory values and other imaging modalities are discussed. Lectures are correlated with scan labs.

Prerequisite: DMS 331.

DMS 333. Abdominal Sonography III. (2 Credits)

This course focuses on normal gross anatomy, cross-sectional anatomy, and relational anatomy of the GI tract and abdominal wall. The use of contrast and performance of invasive procedures is covered. Physiology and pathology are emphasized. Related laboratory values and other imaging modalities are discussed. Lectures are correlated with scanning lab demonstrations.

Prerequisite: DMS 332.

DMS 341. Ob & Gyn Sonography I. (3 Credits)

This course focuses on the non-gravid female pelvis and will enable the student to identify the normal organ anatomy of the female pelvis along with supporting structures and vasculature. The student will have a thorough understanding of the physiology of the various stages of the female reproductive system. Physiology, pathology and pathophysiology are emphasized. The student will be able to identify and differential gynecologic pathology. Scanning protocol will be discussed with correlating scan lab demonstrations.

DMS 342. Ob & Gyn Sonography II. (3 Credits)

This course focuses on the gravid uterus, types of imaging in pregnancy and normal fetal development in all three trimesters. Biometrics in all three trimester will be covered. This course is the precursor to Ob/Gyn Sonography 3, which focuses on fetal anomalies. Some course content between Ob/Gyn 2 and Ob/Gyn 3 will overlap. The role of the sonographer along with ethics and performance specifications will be explored. Obstetric models, if available, are used during integrated scan labs to give the student proctored, hands-on scanning experience.

Prerequisite: DMS 341.

DMS 351. Case Reports 1. (1 Credit)

Case presentation and exam critique classes are held throughout the program. This course requires students to present cases from clinical rotations. Presentations will be judged on clinical history, correlative testing, differential diagnosis, image analysis and participation.

DMS 352. Case Reports 2. (1 Credit)

Case presentation and exam critique classes are held throughout the program. This course required students to present cases from clinical rotations. Presentations will be judged on clinical history, correlative testing, differential diagnosis, image analysis and participation.

Prerequisite: DMS 351.

DMS 371. Clinical Practicum I. (3 Credits)

Students will receive clinical instruction in sonographic procedures at their assigned clinical sites. Under the direct and indirect supervision of registered clinical staff, students will perform, assist, and observe sonographic examinations. In addition to clinical site rotations, clinical practicum includes scan lab instruction as indicated. Clinical competency will be assessed and documented to record student achievement of sonographic clinical skills.

DMS 372. Clinical Practicum II. (2 Credits)

Students will receive clinical instruction in sonographic procedures at their assigned clinical sites. Under the direct and indirect supervision of registered clinical staff, students will perform, assist, and observe sonographic examinations. In addition to clinical site rotations, clinical practicum includes scan lab instruction as indicated. Clinical competency will be assessed and documented to record student achievement of sonographic clinical skills.

Prerequisite: DMS 371.

DMS 373. Clinical Practicum III. (4 Credits)

Students will receive clinical instruction in sonographic procedures at their assigned clinical sites. Under the direct and indirect supervision of registered clinical staff, students will perform, assist, and observe sonographic examinations. In addition to clinical site rotations, clinical practicum includes scan lab instruction. Clinical competency will be assessed and documented to record student achievement of sonographic clinical skills.

Prerequisite: DMS 372.

DMS 374. Clinical Practicum IV. (3 Credits)

Students will receive clinical instruction in sonographic procedures at their assigned clinical sites. Under the direct and indirect supervision of registered clinical staff, students will perform, assist, and observe sonographic examinations. In addition to clinical site rotations, clinical practicum includes scan lab instruction as indicated. Clinical competency will be assessed and documented to record student achievement of sonographic clinical skills.

Prerequisite: DMS 373.

DMS 403. Musculoskeletal Sonography. (2 Credits)

Students will be instructed on the anatomy, physiology, and pathology of the musculoskeletal system as it relates to sonography. Students will learn scanning techniques of the shoulder, elbow, knee, and ankle. Scan labs will be integrated in to the curriculum to provide hands on skills.

DMS 414. Sonography Principles and Instrumentation Review. (1 Credit)

This course is intended to prepare the student to take the ARDMS SPI exam. Review and mock boards will be conducted. This course is only scheduled to run for five weeks during the semester.

DMS 424. Pediatric Sonography. (2 Credits)

This course emphasizes the role of a diagnostic medical sonographer as it pertains to pediatric sonography. This course will investigate neonatal echoencephalography, spine and hip. It further explores sonography of the infant and neonatal abdomen, including kidneys, gastrointestinal and the diagnosis of jaundice. Imaging models will be used periodically, when available, for integrated scan lab instruction.

DMS 443. Ob & Gyn Sonography III. (3 Credits)

This course focuses on the 2nd and 3rd trimester patient and sonographic exam with specific attention to abnormal conditions and congenital anomalies of the fetus. This course is designed to follow the Ob/Gyn 2 course and content is designed to overlap. The role of the sonographer along with ethics and performance specifications will be explored. Obstetric models, if available, are used during integrated scan labs to give the student proctored, hands-on scanning experience.

Prerequisite: DMS 342.

DMS 444. Ob & Gyn Sonography IV. (3 Credits)

This course emphasizes the role of a diagnostic medical sonographer as it pertains to women's reproductive health in both obstetrics and gynecology. This course will further investigate complex obstetrical and gynecologic anomalies, the balance of maternal and fetal needs, ethics specific to obstetrics, emerging technologies, labor delivery, post-partum, complementary and alternative medicine as well as registry exam review in Ob-Gyn. Imaging models will be used periodically, when available, for integrated scan lab instruction.

Prerequisite: DMS 443.

DMS 453. Case Reports 3. (1 Credit)

Case presentation and exam critique classes are held throughout the program. This course requires students to present cases from clinical rotations. Presentations will be judged on clinical history, correlative testing, differential diagnosis, image analysis and participation.

DMS 454. Case Reports 4. (1 Credit)

Case presentation and exam critique classes are held throughout the program. This course requires students to present cases from clinical rotations. Presentations will be judged on clinical history, correlative testing, differential diagnosis, image analysis and participation.

Prerequisite: DMS 453.

DMS 460. Professional Development in Sonography. (1 Credit)

This course will explore professionalism in general and as it relates to sonography. Topics include job exploration, interview and resume building designed to enhance skills for entry into the workforce.

DMS 475. Clinical Practicum V. (6 Credits)

Students will receive clinical instruction in sonographic procedures at their assigned clinical sites. Under the direct and indirect supervision of registered clinical staff, students will perform, assist, and observe sonographic examinations. In addition to clinical site rotations, clinical practicum includes scan lab instruction as indicated. Clinical competency will be assessed and documented to record student achievement of sonographic clinical skills.

Prerequisite: DMS 374.

DMS 476. Clinical Practicum VI. (2 Credits)

Students will receive clinical instruction in sonographic procedures at their assigned clinical sites. Under the direct and indirect supervision of registered clinical staff, students will perform, assist, and observe sonographic examinations. In addition to clinical site rotations, clinical practicum includes scan lab instruction as indicated. Clinical competency will be assessed and documented to record student achievement of sonographic clinical skills.

Prerequisite: DMS 475.

DMS 477. Clinical Practicum VII. (7 Credits)

Students will receive clinical instruction in sonographic procedures at their assigned clinical sites. Under the direct and indirect supervision of registered clinical staff, students will perform, assist, and observe sonographic examinations. In addition to clinical site rotations, clinical practicum includes scan lab instruction as indicated. Clinical competency will be assessed and documented to record student achievement of sonographic clinical skills.

Prerequisite: DMS 476.

DMS 480. Registry Review. (3 Credits)

Classroom involvement during the last semester of the program is dedicated to reviewing for the ARDMS exam. This course provides students with the opportunity to improve test-taking skills.

Prerequisites: (DMS 333, 443 and 323).