

Diagnostic Medical Ultrasound (DMU)

DMU 1000: Introduction to Diagnostic Medical Ultrasound

Introduction to the profession of diagnostic medical ultrasound. Imaging characteristics, educational requirements, professional trends. Observation opportunities. Graded on S/U basis only.

Credit Hour: 1

DMU 3212: Sectional Anatomy

A study of human anatomy using the sectional approach; anatomical structures will be related to modern medical imaging techniques. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 3309: Normal Ultrasound Clinical

Integration of ultrasound instrumentation and clinical practice in a laboratory setting. Interaction between the sonographer, equipment and patient.

Credit Hours: 5

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 3313: Sonography Principles and Instrumentation I

Principles of diagnostic ultrasound physics and instrumentation. The SPI course sequence will explore sound wave characteristics, tissue interaction, instrumentation, contrast, artifacts, biological effects, clinical safety, patient care, quality assurance, hemodynamics, and Doppler physics. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 3315: Sonography Principles and Instrumentation II

Principles of diagnostic ultrasound physics and instrumentation. The SPI course sequence will explore sound wave characteristics, tissue interaction, instrumentation, contrast, artifacts, biological effects, clinical safety, patient care, quality assurance, hemodynamics, and Doppler physics. Continuation of DMU 3313. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students. Successful completion of DMU 3313 with grade of C or higher

DMU 3322: Superficial Organs Ultrasound

Ultrasound evaluation and diagnosis of normal and abnormal superficial organs; thyroid gland, testes, breasts, soft tissues and musculoskeletal.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4001: Topics in Diagnostic Medical Ultrasound

Organized study of selected topics in medical ultrasound. Topics may vary. May be repeated for credit. Graded on A-F basis only.

Credit Hour: 1-99

Prerequisites: restricted to Diagnostic Medical Ultrasound undergraduate students

DMU 4001W: Topics in Diagnostic Medical Ultrasound - Writing Intensive

Organized study of selected topics in medical ultrasound. Topics may vary. May be repeated for credit. Graded on A-F basis only.

Credit Hour: 1-99

Prerequisites: restricted to Diagnostic Medical Ultrasound undergraduate students

DMU 4008: Writing for Health Science

In this course, ultrasound students will identify basic principles of research in the medical field, distinguish writing parameters applicable to ultrasound journals, and write a clinical case study. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Admission to the Diagnostic Medical Ultrasound Program

DMU 4008W: Writing for Health Science - Writing Intensive

In this course, ultrasound students will identify basic principles of research in the medical field, distinguish writing parameters applicable to ultrasound journals, and write a clinical case study. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Admission to the Diagnostic Medical Ultrasound Program

DMU 4015: Ultrasound Professional Preparation

Preparation for professional ultrasound practice. Topics include earning and maintaining certification, professional practice standards, clinical writing, and health science resume preparation. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Admission to the Diagnostic Medical Ultrasound program

DMU 4085: Problems in Diagnostic Medical Ultrasound

Independent study leading to a special project or paper. May be repeated for credit. Graded on A-F basis only.

Credit Hour: 1-99

Prerequisites: restricted to Diagnostic Medical Ultrasound undergraduate students only

DMU 4085W: Problems in Diagnostic Medical Ultrasound - Writing Intensive

Independent study leading to a special project or paper. May be repeated for credit. Graded on A-F basis only.

Credit Hour: 1-99

Prerequisites: restricted to Diagnostic Medical Ultrasound undergraduate students only

DMU 4200: Principles of Diagnostic Medical Ultrasound

Principles and history of ultrasound, ultrasound equipment, sonographic techniques, aspects of patient care.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students only

DMU 4234: Clinical Pathophysiology

Abnormal function of organ systems in the presence of disease; clinical manifestations and medical management.

Credit Hours: 3

DMU 4234W: Clinical Pathophysiology - Writing Intensive

Abnormal function of organ systems in the presence of disease; clinical manifestations and medical management.

Credit Hours: 3

DMU 4311: Pathological Images of Ultrasound

Disease presentation in ultrasound imaging. Practical aspects of ultrasound scanning techniques in pathology.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4314: Abdominal Ultrasound

Differentiation between normal and pathological ultrasound studies of the abdomen. Differential diagnosis of pathological states.

Credit Hours: 5

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4318: Gynecology Ultrasound

Study of normal and abnormal gynecological ultrasound anatomy. Distinction between normal and pathological states and ultrasound differential diagnosis.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4320: Obstetrics Ultrasound

Study of normal and abnormal obstetrical ultrasound anatomy. Distinction between normal and pathological OB ultrasound studies with emphasis on differential diagnosis.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4326: Sonography Principles and Instrumentation III

Principles of diagnostic ultrasound physics and instrumentation. The SPI course sequence will explore sound wave characteristics, tissue interaction, instrumentation, contrast, artifacts, biological effects, and Doppler physics. Includes preparation for the ARDMS SPI exam. Continuation of DMU 3315. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students. Successful Completion of DMU 3315 with grade of C or higher

DMU 4330: Vascular Ultrasound Lab

Vascular ultrasound scanning techniques, protocols, measurements, film/video critique, and Plethysmography in a clinical lab setting.

Credit Hours: 3

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4332: Vascular Ultrasound

Vascular ultrasound for normal and pathological processes: study of disease, correlation of patients' clinical data and ultrasound findings used in differential diagnosis.

Credit Hours: 4

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4342: Adult Cardiac Ultrasound

Principles of diagnostic adult cardiac ultrasound (echocardiography). The course will explore cardiac anatomy, physiology, basic electrocardiography (EKG), mechanisms of disease, sonographic

techniques, measurements, quantitative principles, stress echocardiography and cardiac pharmacology. Graded on A-F basis only.

Credit Hours: 6

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4941: Ultrasound Clinical I

Application of medical ultrasound in supervised clinical settings. Decisions regarding diagnosis, patient handling and imaging.

Credit Hours: 7

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4943: Ultrasound Clinical III

Final clinical application of general medical ultrasound practicum in supervised clinical settings. Further enhancement of practice, decision making, patient handling, image processing and case studies.

Credit Hours: 6

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4944: Vascular Ultrasound Clinical IV

Application of diagnostic vascular ultrasound in supervised clinical settings: practice, decision making, patient handling and image processing.

Credit Hours: 7

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 4945: Cardiac Ultrasound Clinical V

Application of ultrasonography in real clinical settings for learning, practicing and decision making regarding, patient handling and imaging process with students supervised in a clinical setting. Graded on A-F basis only.

Credit Hours: 6

Prerequisites: DMU 3313, DMU 3315, and DMU 4944. Instructor and Departmental permission required

DMU 4946: Cardiac Ultrasound Clinical VI

Further application of ultrasonography for continuation of learning, practicing and decision making, patient handling and imaging process with students supervised in a clinical setting. Graded on A-F basis only.

Credit Hours: 6

Prerequisites: DMU 3313, DMU 3315, DMU 4338 and DMU 4945. Instructor and Departmental permission required

DMU 4993: Ultrasound Clinical II

Application of medical ultrasound in supervised clinical settings with practice and decision making related to ultrasound diagnosis, patient handling and image processing.

Credit Hours: 8

Prerequisites: Restricted to Diagnostic Medical Ultrasound students

DMU 8001: Topics in Diagnostic Medical Ultrasound

Organized study of selected topics. Topic may vary.

Credit Hour: 1-3

Prerequisites: restricted to students enrolled in the Diagnostic Medical Ultrasound program only

DMU 8012: Diagnostic Imaging Administration

In this course, students will analyze accreditation, education, and billing considerations specific to clinical diagnostic imaging laboratories and identify strategies for successful implementation and compliance. Graded on A-F basis only.

Credit Hours: 3

DMU 8023: Ultrasound Education

In this course, students will analyze ARDMS, JRC-DMS, and CAAHEP policies and develop strategies for adherence to and application of these policies within the ultrasound education setting. Graded on A-F basis only.

Credit Hours: 3

DMU 8034: Writing for Publication in the Imaging Sciences

This course will explore the publication options available to diagnostic imaging professionals, facilitate understanding of writing standards for professional journals, and guide students in writing a case study, original research, literature review or other type of article appropriate for peer-review submission. Graded on A-F basis only.

Credit Hours: 3

DMU 8085: Problems in Diagnostic Medical Ultrasound

Independent study of a special project involving clinical applications or research. Topic may vary.

Credit Hour: 1-99

Prerequisites: restricted to students enrolled in the Diagnostic Medical Ultrasound program only