

# DIAGNOSTIC IMAGING (DMI)

## DMI 101 Introduction to Medical Imaging

1 cr. Undergraduate.

Introduction to Diagnostic Medical Imaging modalities with a special emphasis on Radiologic Technology and Diagnostic Medical Sonography.

**Prerequisites:** none.

**Course Rules:** Counts as repeat of BMS 290 with similar topic.

**Last Taught:** Spring 2023, Fall 2022, Spring 2022, Fall 2021.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 300 Diagnostic Medical Imaging Fundamentals

2 cr. Undergraduate.

Introduction to physics as it relates to Diagnostic Medical Imaging. Students will explore the fundamental principles of physics and its application to Medical Imaging equipment and instrumentation.

**Prerequisites:** Radiography or Diagnostic Medical Sonography intended student or consent of instructor.

**Last Taught:** Spring 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 306 Imaging Procedures I

5 cr. Undergraduate.

Radiographic anatomy and procedures related to upper and lower extremities, chest, abdomen, and barium studies. Pediatric imaging is discussed.

**Prerequisites:** jr st; BioMed Sci prog or cons instr.

**Last Taught:** Summer 2023, Fall 2022, Summer 2022, Fall 2021.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 307 Seminar in Radiography I

3 cr. Undergraduate.

Basic concepts of patient care, including consideration for the cultural, physical and psychological needs of the patient and family.

**Prerequisites:** jr st; BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Fall 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 308 Imaging Procedures II

5 cr. Undergraduate.

Radiographic anatomy and procedures for the bony thorax, vertebral column, and iodinated studies will be covered. Pediatric imaging for each procedure will be discussed.

**Prerequisites:** jr st; BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Fall 2022, Spring 2022, Fall 2021.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 309 Imaging Procedures III

3 cr. Undergraduate.

Radiographic anatomy and procedures for the cranium and facial bones; pediatric imaging for each procedure will be discussed.

**Prerequisites:** none.

**Last Taught:** Summer 2023, Spring 2023, Summer 2022, Spring 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 310 Introduction to Sonography

3 cr. Undergraduate.

Introduction to Diagnostic Medical Sonography with an overview of basic terminology, techniques, and equipment.

**Prerequisites:** jr st; BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 311 Abdominal Sonography-I

3 cr. Undergraduate.

Anatomy, physiology, pathology, and pathophysiology of the abdominal vessels and organs as they relate to sonography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 312 Abdominal Sonography-II

3 cr. Undergraduate.

Anatomy, physiology, pathology, and pathophysiology of the kidneys and abdominal organs as they relate to sonography.

**Prerequisites:** jr st BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 313 Sonography Clinical Education I

3 cr. Undergraduate.

Introduction to sonography scanning and development of clinical skills.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 319 Abdominal Sonography III

3 cr. Undergraduate.

Normal gross, cross-sectional, relational and sonographic anatomy of superficial structures including male pelvis, thyroid, parathyroid glands. Pathologic findings are correlated with causative etiologies utilizing lab values in conjunction with ultrasound protocols.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.

**Last Taught:** Summer 2023, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 320 Obstetrics/Gynecology Sonography I

3 cr. Undergraduate.

Normal gross, relational and sonographic anatomy of the female pelvic region. Physiology and related laboratory and clinical findings for disease processes are discussed.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 321 Obstetrics/Gynecology Sonography II

3 cr. Undergraduate.

Gravid uterus and fetal development. Gestational dating methods, embryology, and maternal and fetal anatomy.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## DMI 322 Obstetrics/Gynecology Sonography III

3 cr. Undergraduate.

Fetal anomalies, disease processes, and pathologies. Various fetal and maternal pathologies explained in sonographic terms.

**Prerequisites:** jr st in Bio Med Sci prog or cons instr.

**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 323 Sonographic Principles and Instrumentation**

3 cr. Undergraduate.

Characteristics of sound and mechanism of sonographic image production and display. Potential biological effects. Safety and mathematical principles.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 324 Sonography Clinical Education II**

3 cr. Undergraduate.

Clinical practicum rotations including abdominal and OB/GYN imaging, and vascular technology.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 325 Specialized Sonography**

3 cr. Undergraduate.

Embryology, structure, physiology, and pathology of the thyroid, breast, and testicle. Normal and abnormal gross, cross-sectional, and relational sonographic anatomy.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.

**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 326 Sonography Clinical Education III**

3 cr. Undergraduate.

Clinical practicum rotations including abdominal and OB/GYN imaging, and vascular technology.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 327 Foundations of Sonography I**

2 cr. Undergraduate.

Initial introduction to diagnostic medical sonography with an overview of basic terminology, techniques, and equipment.

**Prerequisites:** jr st; BioMed Sci prog or cons instr.

**Last Taught:** Summer 2020, Summer 2019, Summer 2017, Summer 2016.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 328 Foundations of Sonography II**

1 cr. Undergraduate.

Introduction to diagnostic medical sonography with an overview of basic techniques and equipment.

**Prerequisites:** DMI 327(P); jr st; BioMed Sci prog or cons instr.

**Last Taught:** Fall 2020, Fall 2019, Fall 2017, Fall 2016.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 329 Abdominal Sonography IV**

3 cr. Undergraduate.

Anatomy, physiology, pathology and pathophysiology of the adult prostate, penis, and GI tract and the pediatric abdomen and neck as seen on normal and abnormal sonograms.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 330 Introduction to Breast Imaging**

3 cr. Undergraduate.

This course focuses on the normal gross, cross-sectional, relational, and sonographic anatomy of the breast and associated structures.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 336 Cardiovascular Principles I**

3 cr. Undergraduate.

Introduction to cardiac physiology, mechanical events, left ventricle function indicators, timing of mitral and aortic flow, auscultation, phonocardiography, hemodynamics and Doppler applications of echocardiography.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.

**Last Taught:** Fall 2021, Fall 2020, Fall 2019, Fall 2018.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 337 Clinical Education I - Echocardiography**

3 cr. Undergraduate.

Clinical practicum rotations including adult echocardiography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 338 Cardiovascular Physiology**

3 cr. Undergraduate.

This course will discuss cardiac physiology and electrophysiology, auscultation, mechanical and electrical events of the heart, chronotropic and inotropic forces, and components of the cardiac cycle including IVRT, IVCT, systole, preload, and afterload.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 340 Embryology of the Cardiovascular System**

2 cr. Undergraduate.

Development and developmental anomalies of the cardiovascular system.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2021, Spring 2020, Spring 2019, Spring 2018.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 341 Adult Echocardiography - Valvular Pathology**

3 cr. Undergraduate.

Introduction to cardiac pathology seen on echocardiograms in the adult population.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 342 Clinical Education II - Echocardiography**

3 cr. Undergraduate.

Clinical practicum rotations including adult and pediatric echocardiography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 345 Pediatric Echocardiography I**

3 cr. Undergraduate.

Introduction to various types of congenital heart disease and pediatric cardiac procedures.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 346 Adult Echocardiography II - Cardiomyopathies**

3 cr. Undergraduate.

Cardiovascular disease and diagnostic cardiac procedures in the adult population.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.**Last Taught:** Summer 2023, Summer 2021, Summer 2020, Summer 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 347 Clinical Education III - Echocardiography**

3 cr. Undergraduate.

Clinical practicum which includes adult and pediatric echocardiography clinical rotations with focus on advanced adult competencies.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 350 Introduction to Radiologic Science and Healthcare**

2 cr. Undergraduate.

Introduction to Radiologic Technology imaging principles and equipment. Basic concepts of patient care, emergency care, CPR, medical ethics, legal issues, and cultural diversity.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2023, Fall 2022, Summer 2022, Fall 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 351 Radiation Protection**

2 cr. Undergraduate.

All aspects of radiation protection including radiation safety, detection, and measurement relevant to Radiologic Technology.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 353 Principles of Imaging I**

3 cr. Undergraduate.

Radiographic qualities and factors influencing those qualities. X-ray tube, beam restricting devices, exposure factors, grids and scatter radiation.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 354 Radiographic Procedures I**

3 cr. Undergraduate.

Introduction to radiographic positioning of the chest, upper extremities, urinary and digestive systems. Pharmacology of contrast media.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2019, Fall 2018, Fall 2017, Fall 2016.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 355 Radiography Clinical Education I**

3 cr. Undergraduate.

Students rotate through all aspects of the radiologic science field. A total of 65 competencies must be achieved in two years of clinical education.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 360 Radiation Biology**

2 cr. Undergraduate.

Effects of radiation from the cellular level to the entire human body. Long and short term somatic effects and genetic effects.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 362 Principles of Imaging II**

3 cr. Undergraduate.

Radiographic qualities and the factors influencing those qualities. Systems and chemicals used in radiographic processing. Film and processor sensitometry.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 363 Radiographic Procedures II**

3 cr. Undergraduate.

Introduction to radiographic positioning for lower extremities, spine, and digestive system. Students learn to identify anatomy on radiographs and evaluate them for acceptability.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2020, Spring 2019, Spring 2018, Spring 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 364 Radiography Clinical Education II**

3 cr. Undergraduate.

Students rotate through all aspects of the radiologic science field. A total of 65 competencies must be achieved in two years of clinical education.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 370 Human Structure & Function III**

1 cr. Undergraduate.

Anatomy and physiology of the human body as they relate to the radiography of the skull, facial bone, and circulatory system.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2020, Summer 2019, Summer 2018, Summer 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 371 Radiographic Procedures III**

2 cr. Undergraduate.

Basic concepts of advanced imaging, special procedures, and supplementary imaging modalities.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2020, Summer 2019, Summer 2018, Summer 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 372 Radiographic Clinical Education III**

4 cr. Undergraduate.

Clinical Education allows students to rotate through all aspects of the radiologic science field. A total of 65 competencies must be achieved in two years of clinical education.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 401 Seminar in Radiography II**

2 cr. Undergraduate.

Evaluation of all aspects of the imaging system from processor to generator.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Fall 2022, Summer 2022, Spring 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 402 Introduction to MSK Sonography**

3 cr. Undergraduate.

Study of anatomy (to include anatomic variants), physiology, pathophysiology and the sonographic appearance of the musculoskeletal system as evaluated by diagnostic medical sonography.

**Prerequisites:** junior standing in Biomedical Science program or consent of instructor.

**Last Taught:** Spring 2023, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 435 Adult Echocardiography - Advanced Pathology**

3 cr. Undergraduate.

Cardiovascular pharmacology and the potential effects of cardiac medications on echocardiographic images.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 436 Pediatric Echocardiography II**

3 cr. Undergraduate.

Advanced instruction in various types of congenital heart disease and pediatric echocardiography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 437 Stress Echocardiography**

3 cr. Undergraduate.

Indications, utility, limitations and technical procedures related to exercise stress echocardiography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 438 Clinical Education IV - Echocardiography**

3 cr. Undergraduate.

Clinical practicum rotations including advanced adult and pediatric imaging of the heart with focus on advanced pediatric competencies.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 439 Clinical Education V - Echocardiography**

3 cr. Undergraduate.

Clinical practicum rotations including exercise and pharmacological stress, echocardiograms and transesophageal echocardiograms.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.

**Last Taught:** Spring 2022, Spring 2021, Spring 2020, Spring 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 440 Clinical Education VI - Echocardiography**

3 cr. Undergraduate.

Clinical practicum including advanced imaging in echocardiography techniques.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Summer 2021, Summer 2020, Summer 2019, Summer 2018.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 441 Special Procedures in Echocardiography**

3 cr. Undergraduate.

Indications, utility, limitations and technical procedures related to transesophageal echocardiography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Summer 2021, Summer 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 450 Vascular Sonography I**

3 cr. Undergraduate.

Anatomy, physiology, pathology, and pathophysiology of the peripheral vascular subset of the cardiovascular system as it relates to sonography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Spring 2021, Fall 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 451 Vascular Sonography II**

3 cr. Undergraduate.

Anatomy, physiology, pathology, and pathophysiology of the cerebrovascular subset of the cardiovascular system as it relates to sonography.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Fall 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 452 Sonography Clinical Education IV**

3 cr. Undergraduate.

Clinical practicum including abdominal and OB/GYN imaging, and vascular technology.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 453 Seminar in OB/GYN Sonography**

3 cr. Undergraduate.

The role of ultrasound in assisting with treatment as it relates to women's reproductive health and prenatal care.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.

**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**DMI 454 Embryology of the Heart**

3 cr. Undergraduate.

Echocardiographic examination of the fetal heart including normal anatomy and congenital heart disease.

**Prerequisites:** junior standing in Biomedical Science program or consent of instructor.**Last Taught:** Spring 2023, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 455 Vascular Sonography III**

3 cr. Undergraduate.

Doppler principles, spectral display, hemodynamics of abdominal, transplant organ, and penile vascular techniques; vascular statistics.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 457 Sonography Clinical Education V**

3-4 cr. Undergraduate.

Clinical practicum including abdominal and OB/GYN imaging, and vascular technology.

**Prerequisites:** senior standing in Biomedical Science program or consent of instructor.**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 458 Seminar in Advanced Medical Imaging**

3 cr. Undergraduate.

Comparison of normal and pathological anatomy cases combining diagnostic medical sonography, computed sonography and magnetic resonance imaging.

**Prerequisites:** junior standing in BioMedical Science program or consent of instructor.**Last Taught:** Spring 2023, Spring 2022.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 458X Seminar in Advanced Medical Imaging**

3 cr. Undergraduate.

Comparison of normal and pathological anatomy cases combining diagnostic medical sonography, computed sonography and magnetic resonance imaging.

**Prerequisites:** junior standing in BioMedical Science program or consent of instructor.**Last Taught:** Spring 2023, Spring 2022.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 460 Professional Development in Sonography - Seminar**

3 cr. Undergraduate.

Current trends in health care and sonography. Federal regulations, Medicare, managed care, professional organizations, and certification exam preparation.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Spring 2022, Summer 2021, Spring 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 461 Sonography Clinical Education VI**

3 cr. Undergraduate.

Clinical practicum including abdominal and OB/GYN imaging, and vascular technology.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2021, Summer 2020, Summer 2019, Summer 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 463 Seminar in Education and Management in Medical Imaging**

3 cr. Undergraduate.

Problem solving of management issues relating to diagnostic medical sonography and exploring educational strategies employed in ultrasound education.

**Prerequisites:** junior standing in BioMedical Science program or consent of instructor.**Last Taught:** Spring 2023, Spring 2022.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 463X Seminar in Education and Management in Medical Imaging**

3 cr. Undergraduate.

Problem solving of management issues relating to diagnostic medical sonography and exploring educational strategies employed in ultrasound education.

**Prerequisites:** junior standing in BioMedical Science program or consent of instructor.**Last Taught:** Spring 2023, Spring 2022.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 464 Introduction to Pediatric Sonography/Neurosonography**

3 cr. Undergraduate.

Anatomy, physiology, pathology, pathophysiology and the sonographic appearance of the normal and abnormal fetal and neonatal brain.

**Prerequisites:** junior standing in Biomedical Sciences program or consent of instructor.**Last Taught:** Fall 2022, Spring 2022, Summer 2021, Spring 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 470 Radiographic Physics**

2 cr. Undergraduate.

Atomic and subatomic theories, electrical theory, interaction of x-rays with matter, production of radiation, equipment maintenance, x-ray circuits, tubes, and cooling charts.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Fall 2022, Spring 2022, Fall 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 471 Digital Imaging**

3 cr. Undergraduate.

Radiographic qualities and factors influencing those qualities. Principles of fluoroscopy, AEC, tomography, and other accessory equipment.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2020, Fall 2019, Spring 2019, Fall 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 473 Imaging Procedures IV**

2 cr. Undergraduate.

Skull positioning advanced skills, special procedures, and supplementary imaging modalities.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 474 Radiography Clinical Education IV**

3 cr. Undergraduate.

Students to rotate through all aspects of the radiologic science field. A total of 65 competencies must be achieved in two years of clinical education.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>



**DMI 475 Seminar in Radiography III**

2 cr. Undergraduate.

Current concepts in radiologic technology.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Fall 2022, Spring 2022, Fall 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 477 Cross Sectional Anatomy**

3 cr. Undergraduate.

Structure and physiology of the human body as it appears in cross section. Diagrams, CT, and MRI images are utilized.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Spring 2021, Fall 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 478 Radiologic Pathology**

3 cr. Undergraduate.

Changes that occur in disease and injury and their applications to radiography.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Fall 2022, Spring 2022, Fall 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 479 Radiography Clinical Education V**

3 cr. Undergraduate.

Students rotate through all aspects of the radiologic science field. A total of 65 competencies must be achieved in two years of clinical education.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 480 Seminar in Radiography IV**

2 cr. Undergraduate.

Current concepts in radiologic technology.

**Prerequisites:** sr st in BioMed Sci prog or consent of instructor.**Last Taught:** Spring 2023, Spring 2022, Spring 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 482 Radiography Clinical Internship I**

6 cr. Undergraduate.

600 hours of clinical experience. The student will begin surgical and evening rotations.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 483 Radiography Clinical Internship II**

3 cr. Undergraduate.

Rotations through the Emergency Department, diagnostic area outpatient and orthopedic clinics, CT, MRI, and interventional radiology.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Fall 2022, Fall 2021, Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 484 Radiography Clinical Internship IV**

1 cr. Undergraduate.

70 hours of clinical practice. Opportunity to rotate through any area of interest in a variety of imaging modalities.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 485 Professional Development in Radiography**

2 cr. Undergraduate.

Federal regulations and legislation as they relate to the health care profession and radiology. Preparation for the certification exam.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2023, Spring 2023, Summer 2022, Spring 2022.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 486 Radiography Clinical Education VI**

4 cr. Undergraduate.

Students rotate through all aspects of the radiologic science field. A total of 65 competencies must be achieved in two years of clinical education.

**Prerequisites:** sr st in BioMed Sci prog or cons instr.**Last Taught:** Summer 2023, Summer 2022, Summer 2021, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 489 Radiography Clinical Internship III**

4 cr. Undergraduate.

400 hours of clinical practice. Opportunity to rotate through any area of interest in a variety of imaging modalities.

**Prerequisites:** jr st in BioMed Sci prog or cons instr.**Course Rules:** Counts as repeat of BMS 590 with similar topic.**Last Taught:** Spring 2023, Spring 2022, Spring 2021, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 496 Professional Growth and Career Advancement in Diagnostic Imaging Professions**

3 cr. Undergraduate.

Exploration and discussion of volunteerism and leadership in professional associations, professional advocacy, emerging trends in certification, re-certification and career pathways related to career advancement.

**Prerequisites:** admis to BMS major; or cons instr.**Course Rules:** Counts as repeat of BMS 590 w/ same topic.**Last Taught:** Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 496X Professional Growth and Career Advancement in Diagnostic Imaging Professions**

3 cr. Undergraduate.

Exploration and discussion of volunteerism and leadership in professional associations, professional advocacy, emerging trends in certification, re-certification and career pathways related to career advancement.

**Prerequisites:** admis to BMS major; or cons instr.**Course Rules:** Counts as repeat of BMS 590 w/ same topic.**Last Taught:** Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**DMI 599 Independent Study**

1-3 cr. Undergraduate.

Individualized experience which enables the student to study current topics of interest in Diagnostic Medical Imaging. Level of credit assigned based on time required for completion.

**Prerequisites:** consent of Program Director.**Course Rules:** May be retaken to 15 cr max.**Last Taught:** Spring 2023, Fall 2022, Spring 2022, Fall 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>