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.
Current Offerings: http://uwm.edu/schedule

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: Spring 2018, Fall 2017, Summer 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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 2018, Fall 2017, Spring 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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 2018, Fall 2017, Spring 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

DMI 319 Abdominal Sonography III
2 cr. Undergraduate.
Anatomy, physiology, pathology, and pathophysiology of the male pelvis, intraoperative, and pediatric specialty exams as they relate to sonography.
Prerequisites: jr st in BioMed Sci prog or cons instr.
Last Taught: Fall 2017, Fall 2016, Fall 2015, Spring 2015.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

DMI 321 Obstetrics/Gynecology Sonography II
3 cr. Undergraduate.
Gravid uterus and fetal development. Gestational dating methods, embryo logic, and maternal and fetal anatomy.
Prerequisites: jr st in BioMed Sci prog or cons instr.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
<th>Prerequisites</th>
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<tr>
<td>DMI 328</td>
<td>Foundations of Sonography II</td>
<td>1</td>
<td>Undergraduate</td>
<td>Introduction to diagnostic medical sonography with an overview of basic techniques and equipment.</td>
<td>cm.st in BioMed Sci prog or cons instr.</td>
<td>Last Taught: Fall 2017, Fall 2016, Fall 2015.</td>
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<td>DMI 336</td>
<td>Cardiovascular Principles I</td>
<td>4</td>
<td>Undergraduate</td>
<td>Introduction to cardiac physiology, mechanical events, left ventricle function indicators, timing of mitral and aortic flow, auscultation, phonocardiography, hemodynamics and Doppler applications of echocardiography.</td>
<td>cm.st in BioMed Sci prog or cons instr.</td>
<td>Last Taught: Fall 2017, Fall 2016, Fall 2015, Fall 2014.</td>
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<td>DMI 337</td>
<td>Clinical Education I - Echocardiography</td>
<td>3</td>
<td>Undergraduate</td>
<td>Clinical practicum rotations including adult echocardiography.</td>
<td>cm.st in BioMed Sci prog or cons instr.</td>
<td>Last Taught: Fall 2017, Fall 2016, Fall 2015, Fall 2014.</td>
<td><a href="http://uwm.edu/schedule">http://uwm.edu/schedule</a></td>
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<tr>
<td>DMI 347</td>
<td>Clinical Education III - Echocardiography</td>
<td>3</td>
<td>Undergraduate</td>
<td>Clinical practicum which includes adult and pediatric echocardiography clinical rotations with focus on advanced adult competencies.</td>
<td>cm.st in BioMed Sci prog or cons instr.</td>
<td>Last Taught: Summer 2018, Summer 2017, Summer 2016, Summer 2015.</td>
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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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

DMI 352 Human Structure & Function I
2 cr. Undergraduate.
Structure and physiology of the human body as they relate to radiography of the respiratory, digestive and urinary systems, and skeletal anatomy.
Prerequisites: jr st in BioMed Sci prog or cons instr.
Last Taught: Fall 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

DMI 353 Principles of Imaging I
2 cr. Undergraduate.
Radiographic qualities and factors influencing those qualities. X-ray tube, beam restricting devices, exposure factors, and effects on scatter radiation.
Prerequisites: jr st in BioMed Sci prog or cons instr.
Last Taught: Fall 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

DMI 361 Human Structure & Function II
2 cr. Undergraduate.
Structure and physiology of the human body as they relate to radiography of the digestive and urinary systems and skeletal anatomy.
Prerequisites: jr st in BioMed Sci prog or cons instr.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

DMI 364 Radiography Clinical Education II
3 cr. Undergraduate.
Students rotate through all aspects of the radiologic science field. A total of 66 competencies must be achieved in two years of clinical education.
Prerequisites: jr st in BioMed Sci prog or cons instr.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule
DMI 402 Introduction to MSK Sonography  
1 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: jr st in BioMed Sci prog or cons instr.  
Last Taught: Fall 2017, Fall 2016, Fall 2015, Spring 2015.  
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.  
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.  
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.  
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.  
Current Offerings: http://uwm.edu/schedule

DMI 439 Clinical Education V - Echocardiography  
4 cr. Undergraduate.  
Clinical practicum rotations including exercise and pharmacological stress, echocardiograms and transesophageal echocardiograms.  
Prerequisites: jr st in BioMed Sci prog or cons instr.  
Current Offerings: http://uwm.edu/schedule

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.  
Current Offerings: http://uwm.edu/schedule

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.  
Current Offerings: http://uwm.edu/schedule

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: Spring 2018, Fall 2017, Spring 2017, Fall 2016.  
Current Offerings: http://uwm.edu/schedule

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 2018, Fall 2017, Spring 2017, Fall 2016.  
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.  
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.  
Current Offerings: http://uwm.edu/schedule

DMI 454 Introduction to Fetal Echocardiography  
3 cr. Undergraduate.  
Echocardiographic examination of the fetal heart including normal anatomy and congenital heart disease.  
Prerequisites: jr st in BioMed Sci prog or cons instr.  
Last Taught: Fall 2017, Fall 2016, Fall 2015, Fall 2014.  
Current Offerings: http://uwm.edu/schedule

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: Summer 2018, Fall 2017, Fall 2016, Fall 2015.  
Current Offerings: http://uwm.edu/schedule
DMI 457 Sonography Clinical Education V
4 cr. Undergraduate.
Clinical practicum including abdominal and OB/GYN imaging, and vascular technology.
Prerequisites: sr st in BioMed Sci prog or cons instr.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

DMI 460 Professional Development in Sonography - Seminar
3 cr. Undergraduate.
Prerequisites: sr st in BioMed Sci prog or cons instr.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

DMI 464 Introduction to Neurosonography
3 cr. Undergraduate.
Anatomy, physiology, pathology, pathophysiology and the sonographic appearance of the normal and abnormal fetal and neonatal brain.
Prerequisites: jr st in BioMed Sci prog or cons instr.
Current Offerings: http://uwm.edu/schedule

DMI 470 Radiographic Physics I
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: Fall 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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 2018, Fall 2017, Spring 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

DMI 475 Radiographic Physics II
2 cr. Undergraduate.
Current concepts in quality assurance. The physics of advanced modalities. The physics of radiobiology and radiation protection.
Prerequisites: sr st in BioMed Sci prog or cons instr.
Current Offerings: http://uwm.edu/schedule
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: Spring 2018, Fall 2017, Spring 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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 2018, Fall 2017, Spring 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2016, Fall 2015, Fall 2014.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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.
Current Offerings: http://uwm.edu/schedule

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 2018.
Current Offerings: http://uwm.edu/schedule

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: http://uwm.edu/schedule

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: http://uwm.edu/schedule