

**DIAGNOSTIC MEDICAL SONOGRAPHY/MEDICAL EMPHASIS**  
*Semester Sequence of Courses*

**Autumn Semester**

RADTEC 3123	Sectional Anatomy	3
RADTEC 3143	Imaging Pathophysiology	3
RADTEC 3243	Patient Care and Assessment II	3
RADTEC 3463	Computerized Imaging	3
DMS 4303	Abdominal Sonography	3
DMS 4323	Superficial & Special Study Sonography	1
DMS 4641	Laboratory Scanning Experience I	1
	Total Semester Hours	17

**Spring Semester**

RADTEC 3253	Patient Care and Assessment III	3
DMS 4103	Physics and Instrumentation	3
DMS 4343	Obstetric and Gynecologic Sonography	3
DMS 4403	Vascular Sonography	2
DMS 4642	Laboratory Scanning Experience II	1
DMS 4861	Clinical Education I	3
	Total Semester Hours	15

**Summer Semester**

RADTEC 3043	Medical Ethics and Law	3
RADTEC 3423	Federal Regulations	3
RADTEC 4833	Directed Readings & Research	3
RADTEC 4933	Research Methods	2
DMS SI4143	Quality Assurance	3
DMS 4643	Laboratory Scanning Experience III	1
DMS 4862	Clinical Education II	3
	Total Semester Hours	18

**Autumn Semester**

RADTEC DV3003	Psycho-Social Medicine	3
RADTEC 4573	The Female Patient and Medical Imaging	3
RADTEC SI4943	Baccalaureate Thesis	3
DMS 4863	Clinical Education III	3
DMS 4911	Comprehensive Review I	2
	Total Semester Hours	14

**Elective Courses**

DMS 4801	Individualized Research	1-3
DMS 4864	Clinical Education IV (Vascular)	3

**ADVANCED RADIOLOGIC SCIENCE:** If you are declaring a major in DMS and a minor in Advanced Radiologic Science, develop a contract with your faculty advisor. The Advanced Radiologic Science minor must include a minimum of 18 semester credit hours from the Department's RADTEC course offerings and cannot include the RADTEC support courses included in the DMS program.

Effective: Autumn, 2002

Diagnostic Medical Sonography  
 Medical Emphasis

**DIAGNOSTIC MEDICAL SONOGRAPHY/MEDICAL  
COURSE DESCRIPTIONS**

- RADTEC DV3003**    **Psycho-Social Medicine - 3 credit hours**  
Psycho-social aspects of patient care and professional interrelationships with patients and peers.
- RADTEC 3043**    **Medical Ethics and Law - 3 credit hours**  
Medical ethics and law and case studies in medical imaging and radiation therapy.
- RADTEC 3123**    **Sectional Anatomy - 3 credit hours**  
Anatomical study of the body in sagittal, transverse and coronal imaging planes
- RADTEC 3143**    **Imaging Pathophysiology - 3 credit hours**  
Imaging adaptations and alterations in anatomy and physiology with variation outside of the normal range.
- RADTEC 3243**    **Patient Care and Assessment II - 3 credit hours**  
System analysis and advanced level of patient care, assessment and management in radiology.
- RADTEC 3253**    **Patient Care and Assessment III - 3 credit hours**  
Intravenous therapy, patient care procedures and monitoring during imaging studies.
- RADTEC 3423**    **Federal Regulations - 3 credit hours**  
Regulations governing health care, equipment and application of ionizing radiation.
- RADTEC 3463**    **Computerized Imaging - 3 credit hours**  
Processing of digital images in specialized radiographic procedures, three dimensional imaging and computerized management practice.
- RADTEC 4573**    **The Female Patient and Medical Imaging - 3 credit hours**  
This course will familiarize the student to disease processes specific to the female patient and the imaging methods that may be used in diagnosis and treatment. The clinical pathways that are commonly used, involving all radiologic imaging modalities, will be explored. Students who enroll in this course must be certified by the American Registry of Radiologic Technologists.
- RADTEC 4833**    **Directed Readings and Research - 2-4 credit hours**  
Synthesis and analysis of journal articles resulting in a research paper for the purpose of publication.
- RADTEC 4933**    **Research Methods - 2 credit hours**  
The formulation of a hypothesis, study of quantitative research methods, the testing of theories through analytical or statistical inquiry and the preparation of a manuscript.
- RADTEC SI4943**    **Baccalaureate Thesis - 3 credit hours**  
Research in the health professions utilizing the scientific inquiry method.

- DMS 4103**      **Physics and Instrumentation - 3 Credit Hours**  
Elementary principles, propagation through tissues, transducers, pulse echo principles and instruments, images, storage, and display, Doppler, image features and artifacts, bioeffects, and safety.
- DMS SI4143**      **Quality Assurance - 3 Credit Hours**  
Development of a quality assurance program.
- DMS 4303**      **Abdominal Sonography - 3 Credit Hours**  
Concepts in abdominal intraperitoneal and retroperitoneal sonographic scanning technique and protocol to produce and evaluate diagnostic images in the clinical setting.
- DMS 4323**      **Superficial Structure and Special Studies - 1 Credit Hour**  
Concepts in superficial structure sonographic scanning technique and protocol to produce and evaluate diagnostic images in the clinical setting.
- DMS 4343**      **Obstetric and Gynecologic Sonography - 3 Credit Hours**  
Concepts in superficial structures, neonatal brain and spine obstetric and gynecologic sonographic scanning technique and protocol to produce and evaluate diagnostic images and to assist in biopsy and aspiration procedures.
- DMS 4403**      **Vascular Sonography - 3 Credit Hours**  
Concepts in vascular sonographic scanning technique and protocol to produce and evaluate diagnostic images in the clinical setting.
- DMS 4641**      **Laboratory Scanning Experience I - 1 credit hour**  
Patient position and instruction, transducer selection and anatomic placement, scanning protocol, and image quality are practiced and reviewed for medical and vascular sonographic examinations.
- DMS 4642**      **Laboratory Scanning Experience II - 1 credit hour**  
Continuation of DMS 4641.
- DMS 4643**      **Laboratory Scanning Experience III - 1 credit hour**  
Continuation of DMS 4642.
- DMS 4801**      **Individualized Research - 1-3 Credit Hours**
- DMS 4861**      **Clinical Education I - 3 Credit Hours**  
A minimum of 24 hours per week in an active diagnostic sonography department.
- DMS 4862**      **Clinical Education II - 3 Credit Hours**  
Continuation of DMS 4861.
- DMS 4863**      **Clinical Education III - 3 Credit Hours**  
Continuation of DMS 4862.
- DMS 4864**      **Clinical Education IV/Vascular - 3 Credit Hours**  
Contract required to gain additional vascular clinical competencies.
- DMS 4911**      **Comprehensive Review I - 2 Credit Hours**  
Review and requirements for advanced responsibilities of the medical sonographer (1 credit hour) and vascular sonographer (1 credit hour)