

DIAGNOSTIC MEDICAL SONOGRAPHY/CARDIAC 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 4503	Cardiac Sonography I	3
DMS 4644	Laboratory Scanning Experience IV	1
	Total Semester Hours	16

Spring Semester

RADTEC 3253	Patient Care and Assessment III	3
RADTEC 4303	Cardiology	3
DMS 4103	Physics and Instrumentation	3
DMS 4523	Cardiac Sonography II	3
DMS 4645	Laboratory Scanning Experience V	1
DMS 4865	Clinical Education V	3
	Total Semester Hours	16

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 4866	Clinical Education VI	3
	Total Semester Hours	17

Autumn Semester

RADTEC DV3003	Psycho-Social Medicine	3
RADTEC 4573	The Female Patient and Medical Imaging	3
RADTEC SI4943	Baccalaureate Thesis	3
DMS 4867	Clinical Education VII	3
DMS 4912	Comprehensive Review II	1
	Total Semester Hours	13

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.

DIAGNOSTIC MEDICAL SONOGRAPHY/CARDIAC
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 4303 **Cardiology - 3 credit hours**
Detailed study of the heart: anatomy, physiology, pathophysiology, pharmacology, EKGs, and imaging modalities.
- 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 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 4503 **Cardiac Sonography I - 3 Credit Hours**
Concepts in cardiac sonographic scanning technique and protocol to produce and evaluate diagnostic images in the clinical setting.
- DMS 4523 **Cardiac Sonography II - 3 Credit Hours**
Continuation of DMS 4603
- DMS 4644 **Laboratory Scanning Experience IV - 1 credit hour**
Patient position and instruction, transducer selection and anatomic placement, scanning protocol, and image quality are practiced and reviewed for cardiac sonographic examinations.
- DMS 4645 **Laboratory Scanning Experience V - 1 credit hour**
Continuation of DMS 4644.
- DMS 4801 **Individualized Research - 1-3 Credit Hours**
- DMS 4864 **Clinical Education IV/Vascular - 3 Credit Hours**
Contract required to gain additional vascular clinical competencies.
- DMS 4865 **Clinical Education V - 3 Credit Hours**
A minimum of 32 hours per week in an active diagnostic cardiac sonography department.
- DMS 4866 **Clinical Education VI - 3 credit hours**
Continuation of DMS 4865.
- DMS 4867 **Clinical Education VII - 3 credit hours**
Continuation of DMS 4866.
- DMS 4912 **Comprehensive Review II - 1 Credit Hour**
Review and requirements for advanced responsibilities of the cardiac sonographer.