

DIAGNOSTIC MEDICAL SONOGRAPHER (DMS) PROGRAM



HANDBOOK VOLUME V

Rev. January 2012

DMS DEPARTMENT

**Main Campus
4425 West 20 Ave
Hialeah, FL. 33012
(305)821-3333
Fax: (305) 362-0595**

**South Campus
11865 SW 26 St., # H3
Miami, FL. 33175
(305)226-9999
Fax: (305)226-4439**

**Training Center
4206 West 12 Ave
Hialeah, FL. 33012
(305)231-3326**

[E-mail rtdepartment@fnu.edu](mailto:rtdepartment@fnu.edu)

Web Page: www.fnu.edu

**Florida National
University
Diagnostic Medical Sonographer (DMS) Program**

General Information

This handbook has been compiled by the Faculty of the Diagnostic Medical Sonographer (DMS) Program to explain to the students about the policies and procedures followed by Florida National University (FNU) Allied Health Division and its DMS program. All students enrolled in FNU's DMS program are responsible for observing all policies and procedures stated in this handbook, as well as any rules and/or regulations contained in FNU's University catalog. The Faculty will periodically review the policies, procedures, curriculum and any other information contained in this handbook as necessary. The students will be informed of any modification.

Students enrolled in DMS program is expected to comply and to proceed with the pre establish standards of medical ethics and with the policies and procedures of the health care provider facilities during the period of attendance in the clinical centers.

Philosophy

The philosophy of FNU's DMS technology program is based in the nature of the profession. The DMS Technology profession's goal is the production of images used as diagnostic mean used by physicians a diagnostic tool for diseases, also, a DMS technologist needs to interact with other members of the Health Care Work Force.

FNU's DMS Technologic program integrates didactic, laboratory and clinical activities. We consider that this will provide the students the knowledge and skills necessary to fulfill the demands of and entry level position in the DMS field as DMS tech.

FNU considers that the learning environment requires cooperation, commitment and constant assessment of all program's faculty members and students.

FNU's DMS Technology program along the curriculum, integrates activities directed to develop appropriate communication and critical thinking skills, since we consider that these are crucial to be component DMS technologist.

Program Goals

Goal #1: Students will develop knowledge and skills necessary to meet the needs of the community and to enter the field of diagnostic medical imaging as competent, entry-level radiographers.

Goal 2: Students will develop effective verbal, non verbal and written communication skills.

Goal #3: Students will demonstrate professional practices and evaluate the importance of professional growth and life-long learning.

Goal #4: Students will demonstrate critical thinking and problem solving skills.

Goal # 5: Students will demonstrate professional development and growth and set goals for life-long learning.

Program Entrance Requirements

The FNU's DMS Technology, AS program is a collegiate degree, which include 23 General education courses and 57 core requirement courses. This course will provide the students with the knowledge and skills necessary to fulfill the entrance level position as a competent DMS Technologist. After completing this program the students will be eligible to take the American Registry of DMS Technology (ARRT) Certification Test.

In order to be admitted, candidate must:

- Have a high school diploma, GED, or equivalent.
- Complete an interview with an FNU admissions representative.
- Submit a completed and signed Enrollment Application.
- Make a commitment to abide by the directives and regulations as established by the University Board of Governors.
- International students on an I-20 Visa will demonstrate fluency in an English Entrance Exam. Otherwise, the student will have to acquire an adequate level of proficiency.
- Take a diagnostic test as University entrance requirement.
- FNU uses the Test of Essential Academic Skills (TEAS) as program entrance requirement. In order to be admitted in the program, the candidate must achieve a score of 50 % or more.

The rigorous nature of the program, make it is strongly recommended that applicants plan ahead financially for their 26-months in the program. The number of academic hours alongside with required study hours and clinical practicum hours make it difficult for a student to work while enrolled in the DMS Technology program. Transportation is necessary for travel to and from the hospitals for clinical experience. Attendance at all scheduled classes, laboratories and clinical rotations are enforced; each one of those meetings holds an essential component of your progress in the program. All applicants admitted into this program will be required to complete a physical examination and provide a complete immunization record. In addition, a complete FDLE LII and

Local Background Screening in conjunction with Drug Testing will be required by clinical facilities. Positive results could impact a student's chances of attending their hospital rotations, completing the program requirements, or gaining a license to practice upon graduation. The cost of required physical examinations, immunizations, background check and drug test will be paid by the student. Students accepted into the program will be provided with specific details. In addition, you will be required to take a sequential list of courses: BLS-CPR, OSHA and HIV to get prepared for each of your clinical rotations.

TECHNICAL STANDARDS

There is specific health, physical and technical requirements for advancement into all portions of the DMS Technology program more specifically into the clinical practicum. The DMS Technology Program at Florida National University complies with the American with Disabilities Act (ADA), and consistent with the ADA, the attached Essential Functions/Core Performance Standards Worksheet provides the framework to relate functional ability categories and representative activities/attributes to any limitations/deficits in functional abilities. These standards shall be used by the DMS Technology Program in combination with the professional scope of practice, job analysis, and expert consultation to make decisions related to the ability of the DMS Technology student to perform the essential functions in the DMS field as a radiographer.

- Lift, move and transport patients (in excess of 50 pounds) to and from various ambulatory devices, (wheelchair, stretcher, hospital bed, and radiographic table) without causing undue pain or discomfort to patient or oneself.
- The ability to spend prolonged periods of time walking, standing, sitting, bending, reaching, pushing, and pulling.
- Position patients for various DMS examinations. This requires physical touch.
- Manipulate sonography equipment into proper positions, including fixed and mobile units. This requires upper and lower body dexterity.
- Recognize audio sounds and (bells, buzzers, etc...) and visually distinguish colors.
- Respond immediately to emergency situations that may otherwise jeopardize a patient's physical state if speedy care is not administered.
- Evaluate written requisitions for radiographic procedures.
- Communicate (verbal and written) the explanation of procedures and give effective instructions to a patient.
- Obtain medical histories of patients and communicate this information to appropriate members of the health care team.
- Visually evaluate radiographic images.

**Diagnostic Medical Sonographer Technology (DMST),
Associate of Science Degree Program**

This program is designed to prepare the student for performing ultrasound procedures. The student will be trained to develop his (her) skills on the knowledge of interpretation of sonographic images. The student will be able to conduct ultrasound procedures in abdomen, pelvis and small parts. Training will cover organs of abdomen and pelvis, and obstetrical and fetal evaluations. The program prepares the students to pass the national certification exam.

GRADUATION REQUIREMENTS (A MINIMUM OF 87 CREDITS)

REQUIRED COURSES

General Education Requirements		Credit
	Hours	
COMMUNICATIONS (6 CREDITS)		
ENC 1101	English Composition I **	3
SPC 1017	Fundamentals of Oral Communication	3
		Credit Hours
HUMANITIES (3 CREDITS)		3
MATHEMATICS (3 CREDITS)		Credit Hours
MAC 1105	University Algebra I **	3
NATURAL SCIENCE (7 CREDITS)		
PHY 1100C	General Physics	3
BSC 1020C	Human Biology	4
COMPUTERS (4 CREDITS)		
CGS 1030	Introduction to Information Technology	4
SLS 1501	University Study	0
CORE REQUIREMENTS (64 CREDITS)		
HSC1000C	Introduction to Health Care	3
HSC1531C	Medical Terminology	3
BSC 1085C	Anatomy & Physiology I	4
BSC 1086C	Anatomy & Physiology II	4
HSC 1230L	Patient Care Procedures	2
SON 2140C	Axial Anatomy I	3
SON 2146C	Axial Anatomy II	3
SON 2614C	Physics in Ultrasound	2
SON 2807L	Pre-Clinical Sonographic Practice	2
SON 2616C	Sonography Equipment Operation and Image	3
SON 2170C	Introduction to Cardiovascular System	3
SON 2111C	Abdominal Ultrasound	3
SON 2116C	Abdominal Pathology	3
SON 2117C	Artifacts in Ultrasound	1
SON 2121C	Obstetric/Gynecology Ultrasound I	3

SON 2122C	Obstetric/Gynecology Ultrasound II	3
SON 2125C	Gynecology Pathology	2
SON 2126C	Obstetric Pathology	3
SON 2141C	Small Parts Ultrasound	3
SON 2804C	Clinical Practicum in Ultrasound I	3
SON 2814C	Clinical Practicum in Ultrasound II	3
SON 2955L	Journal in Ultrasound Practice	5
SON 2935	Special Topics in Sonography	0

DMS Technology Course description

SON - 1642 ETHICS AND LAW IN DIAGNOSTIC IMAGING (3 credits)

This course is designed to introduce the students in the foundation of law and ethics and their related aspects in Sonography. The student will learn the professional aspects related with the Sonographic technicians and the concepts of liability, negligence, and malpractice, as well as the proper communication, human relationship, and other social issues. (3 hrs. lecture).

SON - 2110 C IMAGE PRODUCTION IN ULTRASOUND (3 credits)

This course will teach how to understand the sonographic visualization of the organs and tissues and how to apply this knowledge in the use of sonographic procedures in order to reach the appropriate image under study. (2 hrs. lecture, 2 hrs. Lab.).

SON - 2111 C ABDOMINAL ULTRASOUND I (3 credits)

This course teaches the standard procedures used in abdominal sonography as well as the recognition of the organs and structures, including vascular structures, liver, biliary systems, pancreas, gastrointestinal tract, spleen, urinary system, retroperitoneal organs, peritoneal cavity, and abdominal wall. The student will be trained in the localization, visualization, and the recognition of the organs and structures of the abdominal cavity. The student will learn about the sonographic images and the anatomical variations of the abdominal organs. (2 hrs. lecture, 2 hrs. Lab.).

SON - 2116 C ABDOMINAL PATHOLOGY (3 credits)

This course instructs on the frequent pathologies and diseases that affect the organs of the abdominal cavity including liver, biliary system, pancreas, gastrointestinal tract, spleen, urinary system, retro peritoneum organs, peritoneal cavity and abdominal wall. The students will be trained in the visualization of masses, vascular changes, and abnormalities in organs of the abdominal cavity as well as the pathologic images and their localization in the abdominal organs. (2 hrs. lecture, 2 hrs. Lab.).

SON - 2117 L ARTIFACTS IN ABDOMINAL ULTRASOUND (1 credit)

This course consists in the training of the student in the visualization and recognition of the common and some infrequent artifacts in images of the organs and structures during abdominal sonography. (1 hr. Lab.).

SON - 2121 C OBSTETRIC / GYNECOLOGIC ULTRASOUND I (3 credits)

The first of two courses. This course will teach the standard procedure for the female pelvis sonographic examination, the recognition of the organs and structures such as vascular structure muscles, uterus, ovaries, urethra and urinary bladder. The students will learn the sonographic image, variations, and localization of the female pelvic organs. (2 hrs. lecture, 2 hrs. Lab.).

SON - 2122 C OBSTETRIC / GYNECOLOGIC ULTRASOUND II (3 credits)

The second of two courses. in this course the student will learn the recognition of organs and structures and the sonographic procedures during the pregnancy. The course includes visualization of vascular structures, muscles, uterus characteristics, placenta, ovaries, urethra, and urinary bladder, and the complete evaluation of the embryo and fetus in normal and abnormal development including malformation syndromes and congenital diseases. The students will be trained in the sonographic localization and visualization of the organs and structures in the mother and in the fetus. (2 hrs. lecture, 2 hrs. Lab.).

SON - 2125 C GYNECOLOGIC PATHOLOGY (2 credits)

This course teaches the fundamental clinic aspects and the sonographic images of the different pathologies and diseases that affect the female pelvic cavity. Students will be trained in the visualization and interpretation of masses, vascular changes, and abnormalities in the gynecological organs and structures. (1 hr. lecture, 2 hrs. Lab.).

SON - 2126 C OBSTETRIC PATHOLOGY (3 credits)

This course consists of the study of the different pathologies and diseases that affect the organs of the pregnant mother and the fetus. Pathologies and abnormalities in the organs and structures of the pelvic cavity

PROGRESSION REQUIREMENTS

The curriculum is dependent upon proper sequencing of courses. The pre-requisite courses (non SON courses) must be completed prior to begin with the SON courses. The general education courses which are program requirements and not prerequisite requirements, may be completed prior to the SON courses or (if accepted) at any time during the program, but must be completed before the end of the program. SON courses have a pre-established sequence in order to ensure and facilitate a gradual and organized learning process. This means that SON courses a specific sequence, if a student does not satisfactorily meet the course learning outcomes, he/she will be unable to progress in the curriculum. The student must stop-out until the course is offered again if the student is allowed to continue in the program. If the student request a “leave”, the student must return when the course if offered again.

SON courses sequence.

Module 1

SON 2140C Axial Anatomy I

SON 2614C Physics in Ultrasound

Module 2

SON 2146C Axial Anatomy II

SON 2616C Sonography Equipment Operation and Image

Module 3

SON 2807L Pre-Clinical Sonographic Practice

SON 2170C Introduction to Cardiovascular System

SON 2141C Small Parts Ultrasound

Module 4

SON 2111C Abdominal Ultrasound

SON 2116C Abdominal Pathology

Module 5

SON 2121C Obstetric/Gynecology Ultrasound I

SON 2125C Gynecology Pathology

Module 6

SON 2122C Obstetric/Gynecology Ultrasound II

SON 2126C Obstetric Pathology

Module 7

SON 2955L Journal in Ultrasound Practice

SON 2935 Special Topics in Sonography

TECHNICAL STANDARDS

Students must be physically capable of successfully performing the following standards related to the occupation in a safe, accurate, and expeditious manner. Please read the following standards carefully, make an assessment of your physical capabilities, and determine if you have any physical limitations that may restrict or interfere with your satisfactory performance of any of the standards listed below.

- Lift, move and transport patients (in excess of 50 pounds) to and from various ambulatory devices, (wheelchair, stretcher, hospital bed, and radiographic table) without causing undue pain or discomfort to patient or oneself.
- The ability to spend prolonged periods of time walking, standing, sitting, bending, reaching, pushing, and pulling.
- Position patients for various DMS examinations protocols. This requires physical touch.
- Manipulate Sonography equipment into proper positions, including fixed and mobile units. This requires upper and lower body dexterity.
- Recognize audio sounds and (bells, buzzers, etc...) and visually distinguish colors.
- Respond immediately to emergency situations that may otherwise jeopardize a patient's physical state if speedy care is not administered.
- Evaluate written requisitions for Sonographic procedures.
- Communicate (verbal and written) the explanation of procedures and give effective instructions to a patient.
- Obtain medical histories of patients and communicate this information to appropriate members of the health care team.
- Visually evaluate radiographic images.

I acknowledge that I have read and understand the above statement regarding the required technical standards.

Student Name (print) _____ Date _____

Student Signature _____

HOSPITAL ROTATION

There are some mandatory requirements needed for any student in order to be scheduled for hospital rotations. They are as follows:

1. HIV course completion
2. OSHA course completion
3. CPR Seminar
4. Proof of Health Screening Evaluation
5. Student ID and University patch on the uniform and lab coat
6. Immunization Record
7. Purify Protein Derivative (Tuberculin Test)
8. Personal Medical Insurance
9. For Female Students-Pregnancy form
10. Good Moral and Character form
11. Annual student Liability Insurance contract copy
12. Annual dosimeter (Monitoring Badge)
13. Introduction to Hospital Policies Seminars-
14. Light Blue Uniform
15. White Lab coat
16. White shoes

Dress Code in the University and In the Clinical Site

The dress code was mutually agreed by The Allied Health Division.

Student Uniform

1. Khaki scrub with the FNU logo (the scrub must be comfortable loose fitting, and ironed.)
2. FNU Student ID and hospital ID if is required.
3. Radiation Monitor (Dosimeter)
4. Preferably White Sneakers
5. Small Earrings in ear lobe
6. No body piercing
7. All body arts (Tattoos) must be covered
8. Hair must be neat and clean and most be worn above the collar.
9. All hair below the collar must be secured above the collar and pulled back from the face.
10. Do not use strong smelling perfumes or after shave lotions
11. Nails should be short and well manicured and only clear nail polish is permitted.
12. No acrylic nails are allowed to be used at the hospital or diagnostic center.

Personal Hygiene

Daily bathing

Least possible makeup

Clean teeth

Smokers spray mouth/use a breath mint and wash hands before returning to close patient contact.

Teeth should be brushed, and mouth wash after lunch or dinner.

Gum chewing is unprofessional and not permitted during patient contact or in patient areas.

Attendance

Students will receive attendance sheets at the beginning of the clinical rotation hours. This sheet must be signed and timed by the supervisor at the clinical site to report in and out. Clinical days and times are not negotiable. Schedule will be assigned according to student time availability.

Any student who will be absent from the Hospital or Diagnostic Center must notify the clinical coordinator and /or program staff and the supervisor of the clinical site.

If your fail to report an absent it will result in five points reduction in the final grade. Three non reported absences will generate a written warning. Two written warnings will force FNU to remove you from the clinical site for the current period. The student is responsible for any financial implication or extension of graduation date. If the student is absent for more than two days, proper documentation that justifies the absent must be to the clinical coordinator.

Each student is responsible for his/her own transportation to the hospital or diagnostic center. The student understands that he/she is fully responsible to be in compliance with the schedule, the clinical hours, and the procedures required by Florida National University in order to complete the program.

DMS Pr

Complete FNU's University admission process



Complete TEA

Complete TEAS test



Complete non SO

Complete SON Courses and Clinical Practice hours.)



End of Program

Submit ARRT application and pass the ARRT(S) credentialing exam



Submit ARDMS Registry



SPI Exam (Sonography Principal of Instrumentation)

Complete the Specialty exam.

RESPONSIBILITY OF STUDENTS HEALTH MAINTENANCE

Florida National University's **Diagnostic Medical Sonographer** Program recognizes that health maintenance is the primary responsibility of the individual student.

Students are therefore required to carry their own health insurance for clinical rotations.

If the student is involved in an incident or accident while in the clinical area, the student will be required to follow the established hospital / clinical facility protocol, complete the incident report form, and to report to the Emergency Department for treatment.

All students must obtain specific immunizations and health screening tests before entering the clinical areas.

A proof of immunization for MMR (two doses), Varicella (2 doses), Hepatitis B (3 doses), and H1N1 must be provided to the school. In the event that the student had the diseases, a blood titer for each disease must be submitted. The result of the annual Tuberculin skin test (PPD) must also be submitted.

Students have the right to decline to receive the Hepatitis B immunization series and H1N1 vaccine. However a refusal to receive the Hepatitis B immunization series and H1N1 vaccine form must be signed by the student before entering the clinical areas.

Immunization records will be submitted to the affiliating hospitals prior to the student's arrival at the health care facility for clinical practicum. Failure to comply with this, the student will not be allowed to participate in clinical rotations.

The requirements are subject to change, depending upon current knowledge and practices relating to health care.



Ultrasound
Clinical Rotation Documents

Date: _____

Name: _____

E-mail: _____

SS # ____/____/____

Phone #: _____

- ✓ CPR/ OSHA/HIV Seminar \$50 FNU/Bursar Office
- ✓ Liability Insurance \$25.50 FNU/Bursar Office
- ✓ Pregnancy Form
- ✓ Good Moral Character
- ✓ Physical Exam
- ✓ Immunization Record
 - Hepatitis
 - Tetanus
 - Rubella
 - MMR
 - Varicella
- ✓ PPD (tuberculosis no more than six months)
- ✓ HIPAA Seminar & Assessment
- ✓ Finger Prints FDLE \$43.00 FNU/Bursar Office
- ✓ Hospital Schedule
- ✓ Student Affiliation A & B
- ✓ Tenet Release Form
- ✓ Vaccine Acknowledge
- ✓ Drug Test \$50 FNU/Bursar Office
- ✓ Copy FNU ID
- ✓ Hospital ID\$5 FNU/Bursar Office
- ✓ Tenet Test
- ✓ FDLE / VECHS Release

Olga L. Palacios MHS
opalacios@fnu.edu
305)821-3333 x 1035