

# *Diagnostic Medical Sonography*

## *A PROGRAM GUIDE*



Sonography, also called ultrasound, is the science of using sound waves to create a diagnostic image to investigate an illness, injury, or possible treatment of a disease. A sonographer works under the direction of a physician, to perform ultrasound exams of many parts of the human body. It is a multifaceted profession consisting of many specialty areas. These areas include: abdominal, obstetrics and gynecology, vascular and cardiac sonography.

The Diagnostic Medical Sonography (DMS) Program at the University of Southern Indiana provides a curriculum which includes didactic courses in conjunction with laboratory and clinical experiences. The DMS curriculum consists of 2 years of pre-requisite general education courses, 1 year of General Sonography course work and 1 year of EITHER Vascular Sonography or Cardiac Sonography course work. Completion of these 4 years results in a Bachelor of Science degree. The student will be eligible to sit for credentialing examinations administered by the American Registry for Diagnostic Medical Sonography (ARDMS).

### **ADMISSION TO THE DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM**

Prospective students must be accepted for admission to USI before being considered for admission to the Diagnostic Medical Sonography Program. Applicants must have graduated from high school and have completed all DMS program prerequisite courses with a minimum grade point average of 3.0 (4.0 scale). DMS program application and accompanying required documents and transcripts must be received by **September 15** of the year the student desires admission to the program. Applicants meeting academic requirements must be in good health, be eligible for ARDMS certification, and be capable of fulfilling program technical standards.

It is required that applicants observe in a variety of sonography settings prior to September 15. The prospective DMS student will utilize observation time within general, vascular and cardiac sonography settings to become familiar with sonographic examinations, standards of practice and the sonographer's role as a healthcare member. The student will assume all responsibility for any illness or injury acquired during observation hours. Within the required narrative, each applicant must indicate which area of study they prefer to pursue in the fourth year of the DMS program, Vascular Sonography or Cardiac Sonography.

The DMS program is limited in the number of students that may be accepted each year. USI, in collaboration with the clinical affiliates, reserves the right to determine the number of students enrolled in each beginning class. In addition, each specialty area of study, Vascular Sonography or Cardiac Sonography can accept only five students. Faculty will attempt to honor the student's preference.

The DMS student selection process involves a review of all required documents and an interview by the DMS admission committee. This committee consists of the program faculty and clinical instructors from each clinical site. Applicants are informed when to schedule the interview via letter from the DMS program director. All interviews are conducted privately and by appointment only. The committee's decision is conveyed by letter approximately two weeks after all interviews are completed.

Prior to beginning the DMS courses, admitted students must submit a medical history and results of a physical examination, drug screen, criminal check, CPR certification, immunization records, documentation of current tuberculosis test status, documentation of completion of Hepatitis B vaccination (3 part series) and a serologic response.

## PROGRAM FEES FOR DIAGNOSTIC MEDICAL SONOGRAPHY

The expenses of the program include tuition and fees, books and uniforms. For information on current charges for tuition and fees, contact the USI Office of Admissions at 812-464-1765. Books required during the program will cost approximately \$1000-\$1200 and uniforms approximately \$200-\$250. These expenses can vary and are subject to change. If housing is required, information on cost and availability can also be obtained through the Office of Admissions. Financial aid information can be obtained through the Office of Student Financial Assistance at 812-464-1767.



### CHECKLIST FOR APPLICATION PROCESS

- **Apply to the University of Southern Indiana (complete admissions process)**
- **Declare Radiologic and Imaging Sciences as your major with Registrar's office**
- **Enroll in and complete prerequisite courses for DMS program**
- **File this application with Diagnostic Medical Sonography program**
- **Submit copies of any completed degrees, diplomas, certificates, or licensures (RT, RN, MD, etc.) to accompany application**
- **Submit verification of observation within general, vascular, and echocardiography areas of sonography.**
- **Provide a signed, dated narrative that addresses these questions:**
  - Why do you believe you are a good candidate for this program?**
  - Describe which sonography discipline you prefer to pursue in the fourth year of the DMS program, Vascular Sonography or Echocardiography; provide a detailed rationale for your preference.**
  - What are your career goals?**
  - Do you have any health care experience? If so, explain in what capacity, length of time, and what you gained from the experience.**
- **Submit all materials no later than September 15 of the year you wish to be considered for admission to Diagnostic Medical Sonography program to:**

**Diagnostic Medical Sonography  
College of Nursing and Health Professions  
University of Southern Indiana, 8600 University Boulevard, Evansville IN 47712**

**CLAUDINE FAIRCHILD, MS, RT, RDMS  
PROGRAM DIRECTOR  
DIAGNOSTIC MEDICAL SONOGRAPHY  
812-464-1994 [cfairchi@usi.edu](mailto:cfairchi@usi.edu)**



**FOR MORE INFORMATION, CONTACT:  
DIAGNOSTIC MEDICAL SONOGRAPHY  
PROGRAM AT:  
812-465-1181**

## 2009-- Bachelors Degree in Radiologic and Imaging Sciences — Sonography

First Year	
<b>Fall</b>	
<i>BIOL 121 Anatomy &amp; Physiology</i>	3
<i>ENG 101 Rhetoric &amp; Composition I</i>	3
<i>HP 115 Medical Terminology</i>	2
<i>MATH (MATH 111 or higher number)</i>	4
<i>IND.DEV./SOC.BEH. (Choose a C2 approved Course)</i>	<u>3</u>
	15
<b>Spring</b>	
<i>ARTS (Choose a B2 approved Course)</i>	3
<i>BIOL 122 Anatomy &amp; Physiology</i>	3
<i>PHYS 101 Introduction to Physical Sciences</i>	3
<i>RADT 196 Orientation to Radiographic &amp; Imaging Sciences</i>	2
<i>CMST 101 Introduction to Speech or</i>	
<i>CMST 107 Interpersonal Communication</i>	<u>3</u>
	14

Second Year	
<b>Fall</b>	
<i>ENG 201 Rhetoric &amp; Composition II</i>	3
<i>HEALTH/FITNESS (Choose a B3 approved Course)</i>	1
<i>HEALTH/FITNESS Activity</i>	1
<i>HIST (Choose a C1 Course)</i>	3
<i>IND.DEV./SOC.BEH. (Choose a C2 approved Course)</i>	3
<i>WESTERN CULTURE (Choose one from the C4 approved Courses—HUM I or For. Lang 203)</i>	<u>3</u>
	14

<b>Spring</b>	
DMS 301 Patient Care for Imaging Sciences Professionals*	2
DMS 313 Sonographic Sectional Anatomy*	2
HA 356 Ethics & Health Care in a Pluralistic Society	3
HP 325 Pharmacology and Therapeutics	3
GLOBAL COMM. (Choose a C5 approved Course)	<u>3</u>
	13

Summer I, II, III	
DMS 312 Introduction to DMS Principles & Procedures*	2
DMS 315 Abdominal Procedures*	3
DMS 316 Sonographic Lab Practice I*	<u>3</u>
	8

*Courses in italicized type are pre-DMS required courses*

**ENG 101, 201, BIO 121, 122, PHYS 101 and MATH 111 must be completed with grade of "C" or better**

\*Must be completed with a grade of "C" or better

Third Year	
<b>Fall</b>	
DMS 321 Sonographic Physics & Instrumentation I*	3
DMS 323 Obstetric Procedures*	3
DMS 324 Gynecology Procedures*	3
DMS 326 Sonographic Lab Practice II*	2
DMS 327 Clinical Practice I — General (24 Hours)*	<u>3</u>
	14
<b>Spring</b>	
DMS 331 Sonographic Physics & Instrumentation II*	3
DMS 332 Small Parts, Neurosonography & Specialty Exams*	3
DMS 333 Critique, Clinical Correlation & Case Analysis*	2
DMS 337 Clinical Practice II — General (32 Hours)*	<u>4</u>
	12

Summer I, II (10 weeks)	
DVT 398 Introduction to Sonographic Vascular Lab*	2
<i>OR</i>	
ECHO 398 Introduction to Echocardiography Lab*	2

Summer I, II, III (15 weeks)	
DMS 347 Advanced Clinical Practice (32 Hours)*	4
DVT 401 Introduction to Vascular Anatomy Procedures*	2
<i>OR</i>	
DMS 347 Advanced Clinical Practice (32 Hours)*	4
ECHO 401 Introduction to Echocardiography*	<u>2</u>
	8

Fourth Year	
<b>Fall</b>	
DVT 402 Vascular Procedures I*	3
DVT 423 Sonographic Vascular Lab Practice I*	2
DVT 426 Clinical Practice I — Vascular (24 Hours)*	3
HP 335 Mechanisms of Pathophysiology	3
WESTERN CULTURE (Choose a C4 approved Course)	<u>3</u>
	14
<i>OR</i>	
ECHO 402 Advanced Echocardiography*	3
ECHO 423 Echocardiography Lab Practice I*	2
ECHO 426 Clinical Practice I-Cardiac (24 Hours)*	3
HP 335 Mechanisms of Pathophysiology	3
WESTERN CULTURE (Choose a C4 approved Course)	<u>3</u>
	14
<b>Spring</b>	
DVT 421 Vascular Procedures II*	2
DVT 436 Critique, Clinical Correlation & Case Analysis*	3
DVT 437 Clinical Practice II — Vascular (32 Hours)*	4
SYNTHESIS (Choose a D approved Course)*	<u>3</u>
	12
<i>OR</i>	
ECHO 421 Pediatric & Fetal Echocardiography*	2
DVT 436 Critique, Clinical Correlation & Case Analysis*	3
ECHO 437 Clinical Practice II-Cardiac (32 Hours)*	4
SYNTHESIS Choose a D approved Course	<u>3</u>
	12

## TECHNICAL STANDARDS FOR DIAGNOSTIC MEDICAL SONOGRAPHY

Prospective students for the DMS program are required to meet certain technical standards necessary for successful and competent performance in ultrasound. The technical standards listed below are determined by the activities commonly performed by sonographers in daily practice. The ability of each student to meet the technical standards is determined through physical examination and competency evaluation.

Each student's general state of health including hearing, eyesight, physical condition and mobility are checked prior to the beginning of clinical education through a physical examination conducted by a physician. Other technical standards such as ability to operate sonographic equipment, lift and move patients and equipment, fill syringes, communicate effectively are determined through competency evaluations conducted during clinical courses.

In order to complete program requirements and achieve full competence as a sonographer, **the student must be able to:**

- Read and understand requisitions, orders, charts, directions and other printed matter.
- Walk through the ultrasound department and hospital, use stairs and stand for long periods of time.
- Lift, move, and assist patients from beds, wheelchairs and stretchers to the ultrasound table and back.
- Give clear verbal commands to a patient and communicate effectively with patients and professional staff verbally and in writing.
- Reach, adjust and operate sonographic equipment.
- Hear sounds from the sonographic machine; hear spoken words including individuals wearing masks.
- Clearly see sonographic images, controls, labels and observe patients.
- Work in a sterile environment, prepare sterile fields, and fill sterile syringes.