

DIAGNOSTIC MEDICAL SONOGRAPHY

Division: Health Science

Division Dean

Colin Preston

Faculty

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Program Mission Statement

The Cypress College Diagnostic Medical Sonography program provides a high quality education to prepare a diverse population of students with entry level skills needed to become competent and confident sonographers.

Program Goals and Objectives

1. Students will have the knowledge and skills to competently and safely perform sonography procedures.
 2. Students will develop the skills necessary to communicate effectively.
 3. Students will use critical thinking and problem solving skills.
 4. Students will evaluate the importance of professional development and growth.
 5. The program will provide the community with entry level sonographers for employment in the healthcare setting.
- Program Effectiveness expected outcomes are:
- a. Students will pass the national certification exam on the 1st attempt.
 - b. Students seeking employment will be gainfully employed within 6 months of graduation.
 - c. Students will complete the program.
 - d. Graduates will be satisfied with their education.
 - e. Employers will be satisfied with the performance of newly hired technologists.

After completing the clinical internship and receiving the completion certificate, the student will be eligible to apply for the certification examination administered by the American Registry of Diagnostic Medical Sonographers (ARDMS). The Diagnostic Medical Sonography program is accredited by the Commission on Accreditation of Allied Health Education Programs.

Commission on Accreditation of Allied Health Education Programs (CAAHEP)

25400 US Hwy 19 North
Suite 158
Clearwater, Florida 33763
Phone: (727) 210-2350
web: [www.caahep.org](http://www.jrcdms.org) (<http://www.jrcdms.org>)

Minimum Standards to Apply

1. Eligibility for admission to Cypress College.
2. High school diploma or GED test, or the high school proficiency examination.
3. Minimum age of 17 years. Must be 18 years old at the start of clinical training.
4. Present evidence of good physical and mental health, as determined by medical examination upon admission to program and prior to enrollment.
5. Overall GPA of 2.0 in all college classes taken.
6. Must have own transportation to all affiliated hospitals.
7. Eligibility for ENGL 100 C or ENGL 101 or ESL 110 (College Writing)
8. See "Prerequisites and Requirements (p.)" for specific course prerequisites needed to apply.

Program Prerequisites (both Degree and Certificate)

The following prerequisite courses must be completed at the time of application with a grade of C or better in each course. Once a passing grade (C or better) has been achieved courses cannot be repeated for a better grade.

Code	Title	Units
Prerequisites		
RADT 142 C	Radiologic Electronics	4
RADT 153 C	Radiography Patient Care	3
HS 145 C	Survey of Medical Terminology	3
HS 147 C	Survey of Disease	3
BIOL 210 C	Anatomy and Physiology	5
Select one of the following:		3-4
ENGL 100 C	College Writing	4
or ENGL 101 C	Enhanced College Writing	
or ESL 110 C	College Comp for Non-N Spkrs	
or COMM 100 C	Human Communication	
or COMM 050 C	Effective Communication	
MATH 100 C	Liberal Arts Mathematics	3
MATH 110 C	Math for Prospective Teachers	4
MATH 110PC	Math for Prospective Teachers	4
MATH 115 C	Finite Mathematics	4
MATH 115PC	Finite Mathematics	4
MATH 120 C	Intro Probability Statistics	4
MATH 120PC	Intro to Probability and Stats	4
MATH 130 C	Survey of Calculus	4
MATH 130PC	Survey of Calculus	4
MATH 141 C	College Algebra	4
MATH 141PC	College Algebra	4
MATH 142 C	Trigonometry	4
MATH 150AC	Calculus I	4
CIS 111 C	Computer Information Systems	3
DMS 160 C	Introduction to Sonography ¹	2

- ¹ DMS 160 C must be completed in the Summer Term prior to enrollment into the Fall Term of the Sonography Program. This course is offered only to the accepted and alternate students who will start the program in the next fall semester.

Application and Selection Procedure

1. A separate application, in addition to the college application, is required for admission into the Diagnostic Medical Sonography Program.
 2. Applications must be completed **online** during the month of **February**. Please see the **Health Science Application link** on the Diagnostic Medical Sonography home page.
 3. Applicants must submit official transcripts (except Cypress and Fullerton Colleges), to admissions and records, by **March 15**.
 4. An appointment with Health Science counselor or attendance at a program information meeting is recommended to discuss selection criteria and deadlines for application process. Selection criteria will award points for grade point average in program prerequisites, and how many times an applicant has applied to the program. Selection criteria is subject to change
 5. Class enrollment is based on the number of approved clinical education centers available. Student capacity is also determined by the Joint Review Commission in Diagnostic Medical Sonographers.
- Diagnostic Medical Sonography Associate in Science Degree (<https://catalog.nocccd.edu/cypress-college/degrees-certificates/diagnostic-medical-sonography/associate-science-degree-diagnostic-medical-sonography/>)
 - Diagnostic Medical Sonography Certificate (<https://catalog.nocccd.edu/cypress-college/degrees-certificates/diagnostic-medical-sonography/diagnostic-medical-sonography-certificate/>)

DMS 160 C Introduction to Sonography 2 Units

Prerequisite(s): RADT 142 C or RADT 153 C or HS 145 C or HS 147 C or BIOL 210 C or ENGL 100 C or ENGL 101 C or ESL 110 C and CIS 111 C, with a grade of C or better.

Term hours 27 lecture and 27 laboratory. This course is designed for the student who has been accepted to the diagnostic medical sonography program. Basic sonography theory is taught with emphasis on sonographic terminology and equipment manipulation. Anatomy identification, scanning planes, transducer orientation, ergonomics, and scanning protocols are included. \$14 materials fee payable at registration. (CSU)

DMS 170 C Sonography Physics 3.5 Units

Prerequisite(s): A minimum grade of C in DMS 160 C and RADT 142 C or a minimum grade of C in PHYS 130 C.

Corequisite(s): DMS 175 C and DMS 172 C.

Term hours: 63 lecture. This course will provide lecture and demonstrations covering the areas of acoustical physics, propagation principles, transducers, machine instrumentation, hemodynamics, harmonics, doppler principles, biological effects, artifacts, and quality control. (CSU)

DMS 172 C Sonography Externship 4 Units

Prerequisite(s): Acceptance to the DMS Program and a minimum grade of C in DMS 160 C, RADT 153 C, HS 147 C.

Co-Requisites DMS 170 C and 175 C Term hours: 256 laboratory TBA. This course is designed to acclimate the sonography student to the hospital setting, sonography department, and the sonography profession. The student is expected to complete a minimum of 256 hours of clinical training at an affiliated hospital. Topics include hospital orientation, HIPAA regulations, SDMS code of ethics, sonography ergonomics, and basic scanning techniques and protocols. (CSU)

DMS 175 C Abdomen Sonography 4 Units

Prerequisite(s): Minimum grades of C in DMS 160 C and RADT 153 C and HS 147 C.

Corequisite(s): DMS 170 C and DMS 172 C.

Term hours: 63 lecture and 27 laboratory. This course will provide a study of the clinical applications of abdomen sonography. It will include abdominal vasculature; liver; gallbladder and biliary system; pancreas; spleen; and kidneys. Interpretation of clinical laboratory tests, related clinical signs and symptoms, and normal and abnormal sonographic patterns will be discussed. This course includes a lab section on basic scanning techniques and protocol. (CSU).

DMS 176 C Pathology and Small Parts 3 Units

Prerequisite(s): DMS 170 C, DMS 172 C, DMS 175 C and RADT 262 C, with a grade of C or better.

Corequisite: DMS 186 C and DMS 207 C. Term hours: 54 lecture. This course will discuss the manifestations of abdominal pathology and disease conditions and their relevance to sonographic procedures including hemodynamic changes. The student will describe abdomen scanning techniques and procedures appropriate for the disease process. Normal anatomy, scanning technique, and pathology of small parts is included as well as neonatal imaging. The course will support the student in the clinical phase of sonographic training. Sonographic technique and actual pathologic cases will be discussed. (CSU)

DMS 186 C Obstetric and Gynecology Sonography 4 Units

Prerequisite(s): DMS 170 C, DMS 172 C and DMS 175 C with a grade of C or better.

Corequisite: Completion of or concurrent enrollment in DMS 176 C and DMS 207 C with a grade of C or better. Term hours: 72 lecture. This obstetric/gynecology sonography course is a study of the pregnant and non-pregnant female reproductive system. This includes an assessment of fetal gestational age, fetal anatomy and pathology, as well as, associated maternal conditions. Gynecological sonography includes normal female anatomy along with pathological processes. Topics of discussion include related clinical symptoms, sonographic appearances, scanning techniques and protocols, and laboratory tests. This course includes a demonstration section on basic scanning techniques and protocol. (CSU)

DMS 188 C Venous Doppler Ultrasound 1.5 Units

Prerequisite(s): DMS 176 C or DMS 186 C and DMS 207 C, with a grade of C or better.

Corequisite(s): DMS 217 C.

Term hours: 27 lecture. This course includes vascular scanning techniques related to upper and lower extremity venous sonographic exams. (CSU)

DMS 195 C Carotid and Arterial Sonography 4 Units

Prerequisite(s): DMS 188 C and DMS 217 C, with a grade of C or better.

Corequisite: DMS 227 C with a grade of C or better. Term hours: 54 lecture and 27 laboratory. This course includes Doppler criteria related to carotid and arterial sonographic exams. (CSU)

DMS 207 C Clinical Education I**8 Units**

Prerequisite(s): Satisfactory completion of the first (Fall) semester of the Diagnostic Medical Sonography Program and DMS 172 C with a grade of C or better.

Term hours: 480 laboratory TBA. This course offers a minimum of 480 hours of clinical experience at an affiliated hospital. This course will provide basic instruction and scanning experiences in abdomen sonography. The student will be able to demonstrate the ability to perform sonographic examinations of the abdomen according to the protocols established by the program and clinical education center utilizing sonography equipment. (CSU)

DMS 210 C Advanced Sonography Topics**3 Units**

Prerequisite(s): DMS 195 C and DMS 227 C with grades of C or better.

Corequisite(s): DMS 237 C.

Term hours: 54 lecture. This course will cover advanced topics in sonography including: pediatrics, interventional, musculoskeletal, and ergonomics. The student will achieve an in-depth comprehension and an increased level of understanding of these advanced sonographic techniques. Additionally, review of abdomen, small parts, vascular, obstetrics and gynecology will be included to help prepare the student for the American Registry of Diagnostic Medical Sonography exams. (CSU)

DMS 217 C Clinical Education II**7 Units**

Prerequisite(s): DMS 176 C, DMS 186 C, and DMS 207 C with a grade of C or better.

Corequisite(s): DMS 188 C.

Term hours: 384 laboratory. This course requires a minimum of 384 hours of clinical experience at an affiliated hospital/medical center. This course will provide basic instruction and scanning experiences in breast, thyroid, scrotum, and doppler sonography. The student will be able to demonstrate the ability to perform sonographic examinations of small parts according to the protocols established by the program and clinical education center utilizing sonography equipment. (CSU)

DMS 227 C Clinical Training III**11 Units**

Prerequisite(s): DMS 188 C and DMS 217 C with a grade of C or better.

Corequisite(s): DMS 195 C.

Term hours: 616 laboratory. This course requires a minimum of 616 hours of clinical training at an affiliated hospital/medical center. This course will provide the basic instruction and scanning experiences in obstetrics and gynecology sonography. The student will be able to demonstrate the ability to perform sonographic examinations of the gravid and non gravid pelvis according to the protocols established by the program and clinical education center utilizing sonography equipment with both transabdominal and endocavity transducers. (CSU)

DMS 237 C Clinical Education IV**11 Units**

Prerequisite(s): DMS 227 C and DMS 195 C, with a grade of C or better.

Corequisite: DMS 210 C with a grade of C or better. Term hours: 612 laboratory. This course requires a minimum of 612 hours of clinical training at an affiliated hospital/medical center. This course will provide basic instruction and scanning experiences in vascular sonography. (CSU)

At Cypress College, there are Department Program Student Learning Outcomes and Degree & Certificate Program Student Learning Outcomes.

Information Competency Skills, and D-Personal, Academic, and Professional Development; specifically, the following ISLO/PSLO subcategories: A1-Health Sciences, B1-Reading, B2-Writing, B3-Communicating, B4-Presenting, C1-Analysis, C2-Computation, C3-Research, C4-Problem Solving, C5-Technology, D1-Personal Responsibility, and D2-Global Citizenship.

Degree & Certificate Program Student Learning Outcomes:

The program student learning outcomes for each award can be found on the specific degree or certificate page.

Department Program Student Learning Outcomes:

The courses taught by this department contribute to the following ISLO/PSLOs: A-Breadth of Knowledge, Competencies, and Skills, B-Communication Skills, C-Critical Thinking, Problem Solving, and