DIAGNOSTIC MEDICAL SONOGRAPHY, ASSOCIATE IN SCIENCE

Program Code: SOAS
Meta-Major: HSCI
Location(s): Melbourne
Delivery Method(s): On-Campus
Previous Degree Required: HS Diploma
Eligible for Financial Aid: Yes
Additional Limited Access Application Process Required: Yes
Program Testing Requirements: CPT - Common Placement Test (PERT, ACCUPLACER, SAT, ACT), TEAS
Classification of Instructional Programs (CIP) Code: 51.0910
Florida Department of Education CIP Code: 1351091004

The program prepares graduates to work in Diagnostic Medical Sonography. The Diagnostic Medical Sonographer is a highly skilled individual qualified by academic and clinical experience to provide diagnostic patient services using ultrasound and related diagnostic techniques and is responsible for producing the best diagnostic information possible with the available resources. Diagnostic Medical Sonographer's acquire and evaluate data, while exercising discretion and judgment in performance of the clinical examination. Visit the program page for more details and how to apply.

Program Requirements

Code	Title	Credit Hours
General Education Courses		
BSCC 1010	General Biology 1	4
ENC 1101	Composition 1	3
MAC 1105	College Algebra	3
Humanities Core Requirement		3
Social/Behavioral Science/Core-Civic Literacy Requirement		3
Major Courses		
SON 1311	Cross-Sectional Anatomy	2
SON 2000	Introduction to Sonography	2
SON 2061	Sonography Seminar	2
SON 2111	Abdominal Sonography 1	2
SON 2112	Abdominal Sonography 2	2
SON 2121	Obstetrical Sonography 1	2
SON 2122	Obstetrical Sonography 2	2
SON 2125	Sonography of the Female Pelvis	2
SON 2147	Sonography of the Breast	2
SON 2171	Introduction to Vascular Sonography	2
SON 2211	Ultrasound Physics and Instrumentation 1	2
SON 2212	Ultrasound Physics and Instrumentation 2	2
SON 2804	Practicum 1	2
SON 2814	Practicum 2	2
SON 2824	Practicum 3	3
SON 2834	Practicum 4	3
SON 2844	Practicum 5	3
SONL 2211	Ultrasound Physics and Instrumentation Laboratory 1	1
SONL 2212	Ultrasound Physics and Instrumentation Laboratory 2	1
Support Courses		
BSCC 2093	Human Anatomy and Physiology 1	4
BSCC 2094	Human Anatomy and Physiology 2	4
CGS 1000	Exploring Digital Technology	3
HSC 1531	Medical Terminology	2
HSCC 1000	Introduction to Healthcare	3
MAT 1033	Intermediate Algebra [1]	3
PHY 2025	Introduction to Principles of Physics	3
Total Credit Hours		**77**

[1]

Or any elective credit

Note: *A grade of "C" or higher is necessary in each major and support course for progression and graduation.*

Faculty suggested course sequence. Students should meet with an advisor for program enrollment guidance.

Course	Title	Credit Hours
Term 1		
BSCC 1010	General Biology 1	4
ENC 1101	Composition 1	3
HSC 1531	Medical Terminology	2
HSCC 1000	Introduction to Healthcare	3
	Credit Hours	**12**
Term 2		
BSCC 2093	Human Anatomy and Physiology 1	4
CGS 1000	Exploring Digital Technology	3
MAC 1105	College Algebra	3
Humanities Core Requirement		3
	Credit Hours	**13**
Term 3		
BSCC 2094	Human Anatomy and Physiology 2	4
PHY 2025	Introduction to Principles of Physics	3
Course Elective		3
Social/Behavioral Science/Core-Civic Literacy Requirement		3
	Credit Hours	**13**
Term 4		
SON 2000	Introduction to Sonography	2
SON 1311	Cross-Sectional Anatomy	2
SON 2804	Practicum 1	2
SON 2211	Ultrasound Physics and Instrumentation 1	2
SONL 2211	Ultrasound Physics and Instrumentation Laboratory 1	1
	Credit Hours	**9**
Term 5		
SON 2111	Abdominal Sonography 1	2
SON 2121	Obstetrical Sonography 1	2
SON 2814	Practicum 2	2

SON 2212	Ultrasound Physics and Instrumentation 2	2
SONL 2212	Ultrasound Physics and Instrumentation Laboratory 2	1
	Credit Hours	**9**
Term 6		
SON 2824	Practicum 3	3
SON 2112	Abdominal Sonography 2	2
SON 2122	Obstetrical Sonography 2	2
	Credit Hours	**7**
Term 7		
SON 2834	Practicum 4	3
SON 2125	Sonography of the Female Pelvis	2
SON 2171	Introduction to Vascular Sonography	2
	Credit Hours	**7**
Term 8		
SON 2844	Practicum 5	3
SON 2061	Sonography Seminar	2
SON 2147	Sonography of the Breast	2
	Credit Hours	**7**
	Total Credit Hours	**77**

Learning Outcomes: Diagnostic Medical Sonography A.S.

1. Demonstrate positioning and scanning procedures for liver, kidneys, adrenals, retroperitoneum, prevertebral vessels, gallbladder, pancreas, spleen, and associated vascular structures seen on cross-section
   - *Core Ability Supported: Process Information*

2. Explain processes of the patient interview, obtaining health history, and performing physical assessment
   - *Core Ability Supported: Model Ethical and Civic Responsibility*

3. Summarize sonographic survey of the abdomen, breast, non-pregnant female, Obstetrical patient, superficial structures, and the vascular system
   - *Core Ability Supported: Think Critically and Solve Problems*

4. Identify internal and surface anatomy, size, and position of the normal gallbladder, cystic duct, hepatic ducts, common bile duct, vaterian system, and related arterial, venous, and lymphatic systems on a sonographic image
   - *Core Ability Supported: Process Information*

5. Differentiate between normal and abnormal sonographic appearances of the liver and gallbladder
   - *Core Ability Supported: Think Critically and Solve Problems*

6. Explain anatomy, physiology, and pathology of various stages of fetal development as related to ultrasound
   - *Core Ability Supported: Think Critically and Solve Problems*

7. Identify normal and abnormal conditions of the second and third trimesters
   - *Core Ability Supported: Think Critically and Solve Problems*

8. Identify anatomical structures of the female reproductive system
   - *Core Ability Supported: Think Critically and Solve Problems*

9. Identify anatomy of the thyroid, parathyroid, and surrounding vascular and muscular structures
   - *Core Ability Supported: Process Information*

10. Identify on sonograms: normal and congenital anatomy, normal versus abnormal sonographic patterns, and pathological conditions
    - *Core Ability Supported: Think Critically and Solve Problems*

11. Summarize indications for sonographic evaluation of the cerebrovascular system
    - *Core Ability Supported: Process Information*

12. Explain concepts of fundamental mathematical functions and algebraic equations utilized in sonographic physics and instrumentation
    - *Core Ability Supported: Think Critically and Solve Problems*

13. Summarize the roles of half-wavelength resonance, damping, and quarter-wavelength matching in the operation of a piezoelectric transducer.
    - *Core Ability Supported: Process Information*

14. Demonstrate professional behavior while in clinical setting
    - *Core Ability Supported: Work Cooperatively*

15. Utilize proper orientation and standard labeling of ultrasound images.
    - *Core Ability Supported: Work Cooperatively*

16. Execute positioning and scanning procedures for the gallbladder and biliary tract
    - *Core Ability Supported: Work Cooperatively*

17. Demonstrate professional behavior while in clinical setting
    - *Core Ability Supported: Work Cooperatively*

18. Distinguish gynecological pathology from normal gynecological anatomy
    - *Core Ability Supported: Communicate Effectively*

19. Utilize a specific transducer type based on the area being scanned.
    - *Core Ability Supported: Process Information*

20. Conduct performance tests using phantoms.
    - *Core Ability Supported: Process Information*