ADULT AND PEDIATRIC CARDIAC SONOGRAPHY (ATC)

Previous Degree Required: A.S./AAS Sonography and credentialed/ registered ARDMS, ARRT, and/or CCI
Eligible for Financial Aid: Yes
Delivery Method(s): On-Campus
Location(s): Melbourne
Limited Access: Yes
Program Testing Requirements: Not Required
Academic Community: HSCI Health Sciences
Program Code: APTC
Classification of Instructional Programs (CIP) Code: 51.0901
Florida Department of Education CIP Code: 0351090166

Duties of sonographers have evolved over the years as advances in adult and pediatric cardiac sonography have provided new imaging modalities and techniques to help aid in providing the best possible care for the adult and pediatric cardiac patient.

These sonographic advances have challenged the cardiac sonographer to obtain an in-depth understanding of adult and pediatric cardiac anatomy and disease processes. Through completion of the Adult and Pediatric Cardiac Sonography ATC, students are able to obtain didactic information and clinical experiences allowing them to enter into the adult and pediatric cardiac specialties.

Eastern Florida State College Adult and Pediatric Cardiac Sonography ATC program supplements student's AAS or A.S. degree in Sonography. Coursework allows students to further their training and obtain the technical information to become a cardiac sonographer. In addition, coursework can be applied towards a BAS Applied Health Sciences specialization: Adult and Pediatric Cardiac Sonography.

Diagnostic cardiac sonographers (also known as an echocardiography technologists) use non-invasive ultrasound machines, laptops and transducers to create images of the inside of patients' hearts, which physicians use to make a medical diagnosis - often without expensive, invasive methods. Cardiac sonographers also maintain the specialized cardiac imaging equipment.

Program-Specific Admissions Information: This is a limited-access program; student must submit a separate application to the program. The program includes courses during two terms each year held on the Melbourne Campus and local clinical settings. To be awarded an ATC, students must have an A.S. or AAS. The ATC in Adult and Pediatric Sonography requires an A.S. in Sonography from an institution accredited by an agency recognized by the U.S. Department of Education. Coursework from the ATC may be used as part of BAS-Applied Health Science: Medical Imaging Sciences -Adult and Pediatric Sonography Specialization. The completion of an A.S. or AAS degree is required for this program.

Refer to the Advanced Technical Certificates overview page to find information about admission, graduation, testing, and other requirements.

Visit the program page for more information.

Health Science Admissions and Advising:
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phone: 321-433-7575
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Program of Study

Code	Title	Credit Hours
Major Courses		
SON 3402	Introduction to Electrocardiography	3
SON 4131	Pediatric Cardiac Sonography	4
SON 4132	Adult and Pediatric Cardiac Sonography Seminar	2
SON 4404	Adult Cardiac Sonography I	3
SON 4405	Adult Cardiac Sonography 2	3
SON 4944	Pediatric Cardiac Sonography Practicum	4
SON 4945	Adult Cardiac Practicum 1	4
SON 4946	Adult Cardiac Practicum 2	4
Total Hours:		**27**

All courses must be completed with a grade of "C" or higher.

Course Sequence

Below is the recommended sequence for taking courses in this degree. Using this guide and meeting with your assigned advisor each term is the key to successful program completion.

Please note that course prerequisites, including required developmental math, reading, or writing, need to be completed to continue on to the more advanced course. Click on the course number to see the requirements.

Code	Title	Credit Hours
SON 3402	Introduction to Electrocardiography [1]	3
SON 4404	Adult Cardiac Sonography I [1]	3
SON 4945	Adult Cardiac Practicum 1 [2]	4
SON 4131	Pediatric Cardiac Sonography	4
SON 4944	Pediatric Cardiac Sonography Practicum	4
SON 4132	Adult and Pediatric Cardiac Sonography Seminar	2
SON 4405	Adult Cardiac Sonography 2	3
SON 4946	Adult Cardiac Practicum 2	4
Total Hours:		**27**

[1] Classroom/lab assignments: 48 hours
[2] 360 combination clinical/lab hours + objectives

Learning Outcomes

1. Demonstrate professional behavior while in an adult cardiac clinical setting
   - *Core Ability Supported: Work Cooperatively*
2. Differentiate between normal and abnormal Electrocardiography
   - *Core Ability Supported: Think Critically and Solve Problems*
3. Identify abnormal and normal conditions for the adult cardiac cycle
   - *Core Ability Supported: Think Critically and Solve Problems*
4. Describe the development of major cardiac structures from conception to birth
   - *Core Ability Supported: Think Critically and Solve Problems*
5. Describe the pathophysiological and hemodynamic consequences of each congenital pathology

- *Core Ability Supported: Think Critically and Solve Problems*

6. Discuss the repair techniques related to selected congenital abnormalities
   - *Core Ability Supported: Think Critically and Solve Problems*
7. Execute proper positioning and standards while in a clinical setting
   - *Core Ability Supported: Work Cooperatively*
8. Describe the variation in imaging planes used in pediatric echocardiography to optimally image atypical anatomy and cardiac positioning.
   - *Core Ability Supported: Work Cooperatively*
9. Recognize echocardiographic anatomy of selected congenital disease, i.e., shunting lesions, transposition of the great vessels, venous anomalies, single ventricle lesions, right and left heart abnormalities, and myocardial pathologies
   - *Core Ability Supported: Work Cooperatively*
10. Identify abnormal and normal pathology and anatomy for the adult cardiac cycle
    - *Core Ability Supported: Think Critically and Solve Problems*