

ECHOCARDIOGRAPHY

Advanced Technical Certificate

Limited -Access

The Echocardiography Program is designed to prepare health professionals who hold an eligible Associate in Science (AS) degree from a regionally accredited institution and the related professional credential with the skills required to perform echocardiograms in the clinical setting.

The program consists of 18 credits of didactic, lab and clinical course work. Those who complete the Echocardiography ATC will be eligible to sit for the Cardiovascular Credentialing International (CCI) Registered Cardiac Sonographer (RCS) specialty examination. After 12 months of full-time clinical cardiac ultrasound experience, program completers will be eligible to sit for the American Registry for Diagnostic Medical Sonography (ARDMS) Sonography Principles & Instrumentation (SPI) and Adult Echocardiography (AE) Exams.

Echocardiography is a limited access program. Admission to Valencia does not imply acceptance to the Echocardiography program. Students must submit a program application and be accepted to the program.

Admission Requirements

- Be a U.S. citizen or U.S. permanent resident
- Review the current Echocardiography Program Guide at <http://valenciacollege.edu/west/health/admissionupdates.cfm>
- Submit a completed Valencia Application for Admission using the Bachelor's Degree/Advanced Technical Certificate application, and be in Active Student Status.
- Have an address in the State of Florida
- Submit to Valencia's Admissions Office an official transcript that indicates that you have earned an Associate degree, or higher, in Cardiovascular Technology, Sonography, Nursing, Radiography, or Respiratory Care from a regionally accredited institution. Students who hold the appropriate professional certification and any Associate in Science degree, Associate in Applied Science degree, or higher from a regionally accredited institution in any other field may also be considered for admission.
- Following your admission to Valencia as a candidate for the Echocardiography Program, submit the Health Sciences Program Application for the Echocardiography Program with a copy of your current professional credential for Cardiovascular Technology (CCI – RCIS or RCES) or Sonography (ARDMS – RDMS, RVT, RMSKS, RPVI or RMSK) or Nursing (State Board of Nursing – RN) or Radiography (ARRT – R or S) or Respiratory Care (NBRC-RRT) and the application fee

Potential Careers

- Echocardiographer

Salary and Earnings Information

For salary and wage information, visit: www.salary.com (<http://www.salary.com>) or www.smart-college-choices.com (<http://www.smart-college-choices.com>)

Contacts

For additional information, visit our website at: <https://net1.valenciacollege.edu/future-students/degree-options/advanced-technical-certificates/>

For more information about the program or admission requirements, please email AlliedHealthBS.ATC@valenciacollege.edu.

Program Outcomes

- The student will learn and demonstrate to the clinician's satisfaction proper patient identification using name, date of birth (DOB) and arm band for verification.
- The student will demonstrate how to professionally introduce themselves to the patient and explain the procedure which they are going to perform.
- The student will demonstrate how to obtain and recognize structures within the heart from tomographic images obtained by both Trans Thoracic Echocardiograms (TTE) and Trans Esophageal Echocardiograms (TEE).
- The student will demonstrate the use of Doppler signals to evaluate the flow within the heart, both normal and abnormal flow in a clinical setting.
- The student will be able to apply these tools to the evaluation of structures within the heart and determine their function in a clinical setting.
- The student will be able to perform a basic echocardiogram examinations including 2D, M-mode, spectral and Color Doppler modalities in a clinical setting to the satisfaction of the sonographer clinician.
- The student will learn how to review a patient's chart for information that could affect their exam and what the goal of that exam should be.
- The student should be able to view and offer objective analysis and calculations to make this determination of function.
- The student will learn and demonstrate professional demeanor in communication with the patients, sonographers and other health care professionals in a clinical setting.
- The student will have cognizant knowledge of the workings and use of ultrasound equipment in advanced procedures and analysis of valvular, congenital and muscular function of the heart.
- The student will learn to obtain and analyze with accuracy all necessary procedures used in the lab section of the class and how they will be applied in Clinical practice at area hospitals.
- The student will learn the use of Doppler signals to evaluate the flow within the heart, both normal and abnormal flow.
- The student will be able to apply these tools to the evaluation of structures within the heart and determine their function. Calculation of valve area from the evaluation and analysis of data obtained will be achieved. Analysis of valvular regurgitation on all of the cardiac valves will be stressed and learned in the lab portion of this course.
- The student should be able to view and offer objective analysis and calculations to make this determination of function. The student will learn how to express these findings in a professional manner to a reading cardiologist.
- Upon completion of this course the student shall be adept at performance of advanced echocardiographic procedures available on hospital ultrasound machines.

- The student shall be expected to perform Tissue Doppler analysis and describe the findings as they relate to that patient's cardiac function.
- The student shall be expected to perform Strain analysis and describe the results as they relate to that patient's cardiac function.
- The student will be well versed in the views obtained by Transesophageal Echocardiograms (TEE).
- The student will be able to assist the cardiologist during a TEE procedure obtaining the correct views and the accurate measurements that are expected from a qualified sonographer during the procedure.
- The student will learn the techniques of three dimensional echocardiography through observation and begin to capture three dimensional images as appropriate in their clinical setting.
- The student shall perform dysschrony studies on select patients, observing and then advancing to performance of this highly technical procedure.
- The student shall be able to determine whether the diagnosis of CHF is accurate for a patient and then be able to demonstrate their reasoning and the tools used to make the correct findings for that patient's cardiac status.

This is a West Campus program.

Specialized courses are not offered every session.

Students who are eligible to enroll in the B.S. in Cardiopulmonary Sciences can apply this certificate as their chosen concentration in fulfillment of graduation requirements.

Year I

Fall Term		Credit Hours
RET 4440C	CARDIAC ULTRASOUND I ⁺ *	3
RET 4443	CARDIAC ULTRASOUND PHYSICS	2
Credit Hours		5

Spring Term

RET 4441C	CARDIAC ULTRASOUND II ⁺ *	3
RET 4942L	CARDIAC ULTRASOUND CLINICAL PRACTICE I ⁺ *	2
Credit Hours		5

Summer Term

RET 4943L	CARDIAC ULTRASOUND CLINICAL PRACTICE II ⁺ *	2
Credit Hours		2

Year II

Fall Term		Credit Hours
RET 4444C	CARDIAC ULTRASOUND III ⁺ *	3
RET 4944L	CARDIAC ULTRASOUND CLINICAL PRACTICE III ⁺ *	3
Credit Hours		6
Total Credit Hours		18

+ This course must be completed with a grade of C or better

* This course has a prerequisite; check description in the Valencia catalog.

NOTES:

Prior to enrollment in a clinical practice, students must provide specific documentation including but not limited to the following:

- Current criminal background check and fingerprinting
- Drug screening
- Physical exam form
- Record with up-to-date immunization data