

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

Cardiovascular Technology / Echocardiography Program (CVT/Echo Program)

Please check jgarcia@ccsf.edu

David Fu davfu@ccsf.edu

Next starting class will be August 2024

The program begins a new class every two years: Fall 2024 and Fall 2026

CVT/Echo offers courses and clinical training to learn the following skills Cardiac Ultrasound (also known as adult echocardiography)

Cardiovascular courses include: cardiac anatomy, cardiac ultrasound, physics of ultrasound, ECG's interpretation, stress testing, pacemaker interpretation, stress echo, cardiac pharmacology. Echo Internships are arranged with regional echocardiography departments

The ultrasound field is a sophisticated health care field that combines technology, independent analysis, patient and professional interaction.

Program Description

- Next starting class is August 2024. The CVT/Echo Program is a two-year program.
- The CVT/Echo Program will intake students every two years: next intake is 2024 & 2026
- There is no option to take this program in one year or to extend it over multiple years.
- The CVT/Echo Program is an impacted program so the number of students accepted is limited
- **Physical expectations for clinical internships:** Students must meet employment-determined job description requirements. Students must be able to perform ultrasound scans (sitting or standing) for an eight-hour internship shift. Student must be able to perform patient care including transferring, positioning, and assisting patients, moving ultrasound systems weighing 300-350 pounds to patient rooms, emergency departments, & critical care units. Must be able to move and adjust patient beds and patient care equipment.
- **Students must be able to provide their own transportation** to clinical assignments which are located throughout the Bay Area
- Students can complete the program with a Certificate of Completion or if all college course requirements are completed with an Associates of Science in CVT/Echo.

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

Prerequisites for entering the CVT/Echo Program August 2024

This program, like all health care programs, is impacted. Twenty students out of an expected 80-100 applicants will be accepted into the CVT/E

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

Orientation Information

The CVT/Echo Program only admits students every two years. The orientations are held in the spring for the fall admission. The orientation dates will be published on a flyer in February. Applicants must have completed the required prerequisites before the application process.

Highly recommended courses and health care experience

Completion of college gi(i)-2 n ilvedu

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

SEQUENCE OF COURSES

The following sequence of courses does not include AS degree graduation requirements.

CVT/ECHO CURRICULUM DESCRIPTION

First Year

First semester (Fall)

Echo 101 Echocardiography 7 units
 Cardiac anatomy and physiology. Principles of cardiac ultrasound Standard cardiac ultrasound images: 2-D and M-Mode, Identification of images & interpretation of normal cardiac structures & function Cardiac Doppler: PW, CW and Color Flow Doppler

CVT 102 Introduction to Sonography and Patient 2 units
 Appreciate work ethic in sonography. Offer some information regarding current and future applications of ultrasound in medicine. Offer some information regarding current and future applications of ultrasound in medicine. Provide a brief overview of law and legal concerns in medicine. Offer an analysis of the sonographer’s scope of practice. Recognize the importance of communication in patient care. apply proper patient care techniques in obtaining vital signs and patient mobilization. Appreciate the need to use standard precautions and personal protective equipment.

CVT 110 Cardiovascular Skills 7 units
 3 hours a week: In the John Adams Campus classroom echo / ECG lab
 3 hours a week: Evening practice with fellow students: California Pacific Medical Center or other facility as indicated, Student is expected to provide her/his own transportation to these sites.

Second semester (Spring)

Echo 201 Advanced Echocardiography Technician 7 units
 Echo and Doppler evaluation of valvular abnormalities, cardiomyopathies, prosthesis, endocarditis, cardiac masses. Application of Doppler formulas to calculate systolic and diastolic function. Transesophageal Echocardiography (TEE) views and Doppler findings

CVT 201 Advanced Cardiovascular Teedi TeT(van)7..048
 C 45.1 (d)7.8 (van)6.9 (v)n4.2 (d)7.8 (i)hoC4.2 (iG.8 (va s)JTJ 0 t.2 (r)13.7 (f)1TpK1p7 (t)6.9 (a)e.

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

CVT 301 Physics of Cardiac Ultrasound

3 units

City College of San Francisco
John Adams Campus

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

2. **Drug Screening Requirement:** Drug screening is required. The cost of this will be incurred by the student. The program will supply the student with the contact information of the company that CCSF utilizes for this screening. Drug screening must be completed within the first six weeks of admission into the program and may need to be updated with each clinical rotation.
- a. Clinical rejection due to any positive drug screen finding including some drugs (including cannabis) that are prescribed or un-prescribed will be cause for program dismissal.
 - b. Any change in drug screening status while in the program may also be cause for program dismissal.
 - c. A positive Drug Screening will require a pre-application procedure with national registering organizations: ARDMS and/or CCI to approve application.
 - d. Clinical sites reserve the right to see the background check results.
 - e. Clinical sites may request an updated/repeat Drug Check during the second year of the program or before the start of an internship.

Health Requirement: Enrollment into the Cardiovascular/Echocardiography Program is subject

City College of San Francisco
 John Adams Campus
 1860 Hayes Street
 San Francisco, CA 94117
 Phone: 415-561-1900

Additionally: certain clinical sites may require immunizations not listed here.

Medical release completed by physician	This form is supplied by CCSF
Background search and drug testing by CCSF specified testing organization	A record of some misdemeanor and/or felony events may result in inability to place student in internships. Positive drug tests may result in inability to place student in internships.
PPD (TB test)	A PPD (or chest X Ray or QuantiFERON blood test) required within 1 month of start of program). This test will be required at the start of the second year of the program or at the requirement of clinical placement
MMR: measles, mumps and rubella	TITER levels indicating immunity of each is required. Booster vaccines may be required.
Varicella	TITER level required indicating immunity of each is required. Re-vaccine may be required.
dTAP: diphtheria, tetanus, pertussis	Immunity / reactive status required within last 5-7 years.
Seasonal flu shots	Required during each full shot season (fall). Failure to have a seasonal flu shot results in student not having physical contact with patients
CPR card	CPR classes offered at John Adams Center

These vaccinations must be completed by the end of the first month of the start of the CVT/Echo Program. These titer levels may need to be repeated during the two years of the program to meet internship site requirements.

Summary of medical requirements submitted by end of first month of program

Many of these immunizations and titer levels are available at CCSF's Student Health Center, Ocean Campus. Fees may apply to some services.

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

ESTIMATION OF COST OF PROGRAM All costs subject to change

Program Contact

Jennifer Garcia, BS, RDCS

David Fu, BS, RDCS

Office: CCSF, John Adams Center, Gym Building, Room 113

jgarcia@ccsf.edu

davfu@ccsf.edu

Phone (415) 561-1813 Fax: (415) 561-1999

Echocardiography Clinical Experience/Internships Sponsored by the CVT/Echo Program

City College of San Francisco
John Adams Campus
1860 Hayes Street

City College of San Francisco
John Adams Campus
1860 Hayes Street
San Francisco, CA 94117
Phone: 415-561-1900

What are the physical requirements for a cardiac sonographer?

Hospitals: sonographers push ultrasound systems that weigh 350 pounds and more. Most sonographers have to move and arrange patient furniture, hospital equipment to position the ultrasound systems, and position and/or transfer patients.

Cardiology offices: usually do not require pushing equipment and moving furniture. During clinical rotations students will be expected to meet the hospital level requirements of moving equipment, patients and furniture.

At the current time sonographers complete 7-8 cases a day (1 per hour). This requires left (or right) arm and hand strength, while the opposite hand manipulates the ultrasound computer system. Students must be able to perform these standing or sitting.