

CARDIOVASCULAR TECHNOLOGY, ADULT ECHOCARDIOGRAPHY, A.A.S. - CVTN

The cardiovascular technologist is a health care professional who, at the direction of a licensed physician, performs diagnostic tests which are used in the diagnosis, treatment and serial follow-up of patients with cardiovascular disease. Cardiovascular Technology is a title used to describe two basic areas of expertise: Invasive Cardiology and Adult Echocardiography.

Adult Echocardiography utilizes ultrasound to perform diagnostics examinations on patients. The non-invasive technologist will utilize state-of-the-art equipment to recognize, calculate, interpret and analyze hemodynamic data derived from the cardiac study.

Admission: Acceptance into Piedmont Technical College's CVTN program is competitive and is limited to 12 students to begin fall semester. See the college calendar or website for application dates.

To become eligible for entry into the Cardiovascular Technology major studies coursework, applicants must complete the following:

1. Complete the following courses (minimum "C" grade required):

Courses	Course Title	Credit Hours
BIO 210	Anatomy and Physiology I	4
BIO 211	Anatomy and Physiology II	4
ENG 101	English Composition I	3
MAT 120 or MAT 110	Probability and Statistics College Algebra	3
PSY 201	General Psychology	3

2. Minimum grade point average for the above courses of 3.0. A grade point average calculator can be found under the Application and Advising tab.
3. Good academic standing at the college.

Students are required to maintain a current American Heart Association "Basic Life Support" certification throughout the major studies courses.

Major Studies Courses: Completion of the Associate in Applied Science with a major in Cardiovascular Technology requires four (4) semesters upon acceptance to the major studies coursework.

Requirements

Courses	Course Title	Credit Hours
General Education Courses		
BIO 210	Anatomy and Physiology I	4
BIO 211	Anatomy and Physiology II	4

ENG 101	English Composition I	3
MAT 120 or MAT 110	Probability and Statistics College Algebra	3
PSY 201	General Psychology	3
SPC 205	Public Speaking	3
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
Subtotal		23

Required Core Subject Areas

CVT 101	Introduction to Cardiovascular Technology	2
CVT 106	Introduction to Non-Invasive Physics	3
CVT 107	Non-Invasive Cardiovascular Physics	3
CVT 112	Cardiovascular Principles	3
CVT 115	Echocardiography Fundamentals	3
CVT 140	Non-Invasive Cardiology I	3
CVT 141	Non-Invasive Cardiology II	3
CVT 142	Non-Invasive Cardiology Clinical I	5
CVT 145	Non-Invasive Cardiology Clinical II - Applications	5
CVT 243	Non-Invasive Cardiology III	3
CVT 245	Non-Invasive Cardiology Clinic III	8
CVT 246	Non-Invasive Cardiology Special Topics	2
Subtotal		43

Other Courses Required for Graduation

AHS 102	Medical Terminology	3
Subtotal		3

Total Hours **69**

Note: Each student is required to complete BIO 211 Anatomy and Physiology II (before the end of the first semester) and SPC 205 Public Speaking (before the end of the second semester). Students are encouraged to complete all general education coursework prior to beginning program coursework.

Our semester-by-semester graduation plans will show you when required courses in your major are offered. Following this plan will help you stay on track and graduate on time.

Enrollment in clinical coursework requires admission to the program. See Application and Advising section for more information.

Fall Start

Course	Title	Hours
First Year		
Fall Semester		
BIO 210	Anatomy and Physiology I	4
ENG 101	English Composition I	3
MAT 120 or MAT 110	Probability and Statistics or College Algebra	3
PSY 201	General Psychology	3
Hours		13
Spring Semester		
AHS 102	Medical Terminology	3

BIO 211	Anatomy and Physiology II	4
SPC 205	Public Speaking	3
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
Hours		13
Second Year		
Fall Semester		
CVT 101	Introduction to Cardiovascular Technology	2
CVT 112	Cardiovascular Principles	3
CVT 115	Echocardiography Fundamentals	3
Hours		8
Spring Semester		
CVT 106	Introduction to Non-Invasive Physics	3
CVT 140	Non-Invasive Cardiology I	3
CVT 142	Non-Invasive Cardiology Clinical I	5
Hours		11
Summer Semester		
CVT 107	Non-Invasive Cardiovascular Physics	3
CVT 141	Non-Invasive Cardiology II	3
CVT 145	Non-Invasive Cardiology Clinical II - Applications	5
Hours		11
Third Year		
Fall Semester		
CVT 243	Non-Invasive Cardiology III	3
CVT 245	Non-Invasive Cardiology Clinic III	8
CVT 246	Non-Invasive Cardiology Special Topics	2
Hours		13
Total Hours		69

Application Process

This is a limited enrollment program that has special admissions requirements. These requirements must be completed before you can be accepted.

If you are a new student, there are three key steps to complete before entering the program:

- Step 1: Apply to the college and complete the enrollment process (<https://www.ptc.edu/admissions/new-students/>)
- Step 2: Take the necessary courses and testing (if required) to become Program-Ready
- Step 3: Apply to the program

Are you Program-Ready?

Before applying for program entry, be sure you meet the requirements for acceptance. Start by connecting with an advisor and review program requirements.

We've also provided the resources below to assist you with the program acceptance process.

Fact Sheet

Fact Sheets are designed for students and advisors to review program-specific requirements and program application procedures. Please make an appointment with your advisor to discuss your academic goals and progress, and to develop your individualized degree plan.

Review the Fact Sheet (https://www.ptc.edu/sites/default/files/documents/new_healthcare_documents/cvt-factsheet.pdf)

GPA Calculator

There are minimum GPA requirements for program-ready coursework. The Program-Ready GPA Calculator can be used to calculate your GPA.

Use GPA Calculator (https://websrv.ptc.edu/program_ready_gpa_calc/)

Application Worksheet

The application worksheet is used to calculate points toward competitive program entry.

Review the Worksheet (https://www.ptc.edu/sites/default/files/documents/new_healthcare_documents/cvtn-app-worksheet.pdf)

Health Care Program Acceptance Data

These are NOT the scores required to be accepted. These are scores from past applicants that were accepted. Since the applicant pool changes each time, there is no way to predict how high the application points need to be for acceptance into the program.

Acceptance Data (https://www.ptc.edu/sites/default/files/documents/new_healthcare_documents/hc-acceptance-data.pdf)

Guided Pathways

Guided Pathways are designed to assist students in scheduling the order of courses to become program-ready or to complete the Health Care Certificate for their desired program.

- College Ready Pathway (https://www.ptc.edu/sites/default/files/documents/new_healthcare_documents/cvti-pathway-college-ready.pdf)

Health Care FAQ

We strongly recommend that students review the Health Care Division FAQ to be fully aware of our program entry requirements.

Learn More (<https://www.ptc.edu/academics/schools-programs/health-care/program-ready-resources/health-care-faq/>)

Apply to the Program

Once you've taken the necessary steps to become program ready, it's time to apply to the program.

Applications are accepted for the fall entry into college healthcare programs on the following schedule:

- Application Dates - May 1-16
- Notification of Program Acceptance Emails Sent - Mid June*

Program applications must be submitted during the scheduled dates for this program to be considered.

Note: If you haven't already done so, you must apply to the college (<https://www.ptc.edu/admissions/new-students/>) before completing the program application.

Complete The Program Application (<https://dynamicforms.ngwebsolutions.com/casAuthentication.ashx?InstID=1044802d-1272-4242-821c-3b248559b0d0&targetUrl=https%3a%2f%2fdynamicforms.ngwebsolutions.com%2fSubmit%2fStart%2f9e57b481-713b-4fd3-99c5-26593359bc42>)

* Students accepted into any Healthcare program will be required to attend a program orientation. Accepted students will NOT be excused from attending this mandatory orientation.

Current Student Program Resources

Cardiovascular Technology Handbook

Cardiovascular Tech Handbook (https://www.ptc.edu/sites/default/files/documents/new_healthcare_documents/cvt-handbook.pdf)

Health Care Division Handbook

This handbook is designed to be utilized in conjunction with the PTC Academic Catalog, PTC Student Calendar and Handbook and PTC Health Care webpages. Please refer to them for additional information.

Read the Handbook (https://www.ptc.edu/sites/default/files/documents/new_healthcare_documents/hc-handbook.pdf)

Health Care FAQ

We strongly recommend that students review the Health Care Division FAQ to be fully aware of our program entry requirements.

Learn More (<https://www.ptc.edu/academics/schools-programs/health-care/program-ready-resources/health-care-faq/>)

Health Care Readmission

Health Care readmission students who fail or withdraw from a Health Care curriculum class must complete and submit a readmission application in order to be considered for readmission.

Complete the Form (<https://www.ptc.edu/health-care-readmission/>)

Accreditation Information

The Cardiovascular Technology program is accredited by:

The Commission on Accreditation of Allied Health Education Programs (CAAHEP):

9355 - 113th St. N, #7709

Seminole, FL 33775

(727) 210-2350

www.caahep.org (<https://www.caahep.org/>)

upon the recommendation of:

The Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT):

www.jrccvt.org (<http://www.jrccvt.org/>)

1449 Hill Street

Whitinsville, MA 01588-1032

(978) 456-5594

Program Effectiveness Data (https://www.ptc.edu/sites/default/files/documents/new_healthcare_documents/cvt-program-effectiveness.pdf)

Program Student Learning Outcomes

Purpose Statement

The Adult Echocardiography program at Piedmont Technical College is dedicated to preparing competent entry-level adult echocardiographers in the cognitive, psychomotor, and affective learning domains for adult echocardiography. Through didactic instruction and clinical experience students will be properly prepared for licensure exams and the workforce.

Program Goal:

To prepare competent entry-level cardiovascular technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for adult echography technology.

Program Student Learning Outcomes (Adult Echocardiography):

1. Apply knowledge of cardiac anatomy, physiology and pathophysiology to assess and analyze the heart through cardiac sonography.
2. Recognize the physical sonographic principles and apply knowledge of the physical sonographic principles and instrumentation during cardiac ultrasound.
3. Demonstrate hands-on skill proficiency and good clinical decision-making to obtain quality echocardiograms that document cardiac pathology adequately.
4. Demonstrate entry-level proficiency on the stress echo and transesophageal echo procedures.
5. Interpret other cardiac diagnostic methods at a basic level.
6. Perform advanced echocardiography techniques at entry level. (contrast, strain, 3D volume/EF)
7. State effective procedures for continuing sonographic education after graduation and throughout the echocardiography career.