

CARDIOVASCULAR TECHNOLOGY (INVASIVE), A.A.S. - CVTI

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.

Invasive Cardiology utilizes highly sophisticated equipment to perform procedures on patients for diagnostic and interventional treatment of cardiovascular diseases as part of the cardiac catheterization team. The invasive technologist assists a qualified cardiologist in all aspects of the cardiac catheterization.

Admission: Acceptance into Piedmont Technical College's CVTI program is competitive and is limited to 8 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
MAT 120 or MAT 110	Probability and Statistics College Algebra	3
ENG 101	English Composition I	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 108	Physics for the Invasive Cardiovascular Technologist	2
CVT 110	Hemodynamics and Cardiac Care Physiology	3
CVT 112	Cardiovascular Principles	3
CVT 117	Invasive Fundamentals	3
CVT 120	Invasive Cardiology I	3
CVT 121	Invasive Cardiology II	3
CVT 122	Invasive Cardiology Clinical I	5
CVT 125	Invasive Cardiology Applications II	5
CVT 223	Invasive Cardiology III	3
CVT 225	Invasive Cardiology Clinical III	8
CVT 226	Invasive Cardiology Special Topics	2
Subtotal		42

Other Courses Required for Graduation

AHS 102	Medical Terminology	3
Subtotal		3

Total Hours **68**

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.

Graduation Plan

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 117	Invasive Fundamentals	3
Hours		8
Spring Semester		
CVT 108	Physics for the Invasive Cardiovascular Technologist	2
CVT 120	Invasive Cardiology I	3
CVT 122	Invasive Cardiology Clinical I	5
Hours		10
Summer Semester		
CVT 110	Hemodynamics and Cardiac Care Physiology	3
CVT 121	Invasive Cardiology II	3
CVT 125	Invasive Cardiology Applications II	5
Hours		11
Third Year		
Fall Semester		
CVT 223	Invasive Cardiology III	3
CVT 225	Invasive Cardiology Clinical III	8
CVT 226	Invasive Cardiology Special Topics	2
Hours		13
Total Hours		68

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/cvti-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.

- Cardiovascular Technology Guided 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

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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 (<http://www.jrccvt.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 Invasive Cardiovascular Technology program at Piedmont Technical College is dedicated to training healthcare professionals in the field of invasive and noninvasive cardiology. Utilizing state-of-the-art equipment, students will successfully recognize, calculate, interpret, and analyze hemodynamic data and will be prepared to perform diagnostic examinations. Through accreditation, didactic instruction and clinical experience students will be properly prepared for National Board Exams.

Program Goal:

To prepare competent entry-level cardiovascular technologists for the communities of interest (students, graduates, faculty, sponsor administration, employers, physicians, and the public) served by the program in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for invasive cardiovascular technology.

Program Student Learning Outcomes

1. Demonstrate the work ethic skills needed for employment in the field of Invasive Cardiovascular Technology
2. Apply knowledge of cardiac anatomy, physiology, and pathophysiology with emphasis to the cardiac catheterization procedure and assessment
3. Interpret other cardiac catheterization methods
4. Demonstrate hands on skill proficiency in cardiac catheterization procedure preparation and facilitation
5. Apply a working knowledge of radiation imaging production, radiation science, radiation biology, and radiation safety as it relates to patient and occupational exposure. ALARA-As Low As Reasonably Achievable
6. Apply knowledge of hemodynamics through mathematical calculations and electronics and medical instrumentation