

# CARDIOVASCULAR TECHNOLOGY, B.S.

## Learning Outcomes

1. Students will demonstrate a solid base of knowledge in biology.
2. Students will demonstrate a solid base of knowledge in chemistry.
3. Students will demonstrate a full range of technical, procedural, and behavioral competencies needed for national certification as a cardiovascular technologist.
4. Students will demonstrate a full range of technical, procedural, and behavioral competencies needed for national certification as a cardiovascular technologist.

The Bachelor of Science degree with a major in cardiovascular technology is awarded upon the following:

1. satisfactory completion of at least 100 semester hours of academic work, including all courses prescribed in the curriculum below;
2. satisfactory completion of an intensive CVT training program, accredited by the Joint Review Committee on Education in Cardiovascular Technology.

## Admissions

Admission to CVT training programs is very competitive, and only a limited number of candidates can be admitted in each class. For this reason the following retention standards are applied during the academic portion of this program at USC:

- Retention. Progressive GPA standards are enforced for continuation in the program. Upon completion of 30 credit hours a minimum GPA of 2.50 is required; at 60 credit hours a minimum GPA of 2.75 is required. Upon completion of the specified academic requirements, only students who have gained admission into an approved CVT training facility will be retained in the program.
- Transfer students admitted to this degree program must complete the last 30 credit hours of academic work in residence at the University of South Carolina prior to entering the intensive CVT training program.
- Students who have already completed a CVT training program or CVT internship will not be eligible for acceptance into this major.

## Degree Requirements (128 hours)

### Program of Study

Requirements	Credit Hours
1. Carolina Core	32-44
2. College Requirements	12-15
3. Program Requirements	23-33
4. Major Requirements	51

### Founding Documents Requirement

All undergraduate students must take a 3-credit course or its equivalent with a passing grade in the subject areas of History, Political Science, or African American Studies that covers the founding documents including the United States Constitution, the Declaration of Independence, the Emancipation Proclamation and one or more documents that are foundational to the African American Freedom struggle, and a minimum

of five essays from the Federalist papers. This course may count as a requirement in any part of the program of study including the Carolina Core, the major, minor or cognate, or as a general elective. Courses that meet this requirement are listed here (<https://academicbulletins.sc.edu/undergraduate/founding-document-courses/>).

## 1. Carolina Core Requirements (32-44 hours)

### CMW – Effective, Engaged, and Persuasive Communication: Written (6 hours)

*must be passed with a grade of C or higher*

any CC-CMW courses (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

### ARP – Analytical Reasoning and Problem Solving (6-8 hours)

- MATH 122\* or MATH 141\*
- STAT 201\* (or equivalent) or higher

### SCI – Scientific Literacy (8 hours)

*must be passed with a grade of C or higher*

- BIOL 243\* & BIOL 243L\*
- BIOL 244\* & BIOL 244L\*

### GFL – Global Citizenship and Multicultural Understanding: Foreign Language (0-6 hours)

Demonstration of proficiency in one foreign language equivalent to the minimal passing grade on the exit examination in the 122 course is required. Students can demonstrate this proficiency by successfully completing Phase II of the Proficiency Test or by successfully completing the 122 course, including the exit exam administered as part of that course.

CC-GFL courses (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

*It is strongly recommended that students continuing the study of a foreign language begin college-level study of that language in their first semester and continue in that language until their particular foreign language requirement is completed.*

### GHS – Global Citizenship and Multicultural Understanding: Historical Thinking (3 hours)

any CC-GHS course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

### GSS – Global Citizenship and Multicultural Understanding: Social Sciences (3 hours)

any CC-GSS course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

### AIU – Aesthetic and Interpretive Understanding (3 hours)

any CC-AIU course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

## CMS – Effective, Engaged, and Persuasive Communication: Spoken Component <sup>1</sup> (0-3 hours)

any overlay or stand-alone CC-CMS course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

## INF – Information Literacy <sup>1</sup> (0-3 hours)

any overlay or stand-alone CC-INF course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

## VSR – Values, Ethics, and Social Responsibility <sup>1</sup> (0-3 hours)

any overlay or stand-alone CC-VSR course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

<sup>1</sup> **Carolina Core Stand Alone or Overlay Eligible Requirements** — Overlay-approved courses offer students the option of meeting two Carolina Core components in a single course. A maximum of two overlays is allowed. The total Carolina Core credit hours must add up to a minimum of 31 hours. Some programs may have a higher number of minimum Carolina Core hours due to specified requirements.

## 2. College Requirements (12-15 hours)

### Foreign Language (0-3 hours)

only if needed to meet 122-level proficiency

### Analytical Reasoning (3 hours)

- CSCE 102 or higher\*

### History (3 hours)

The College of Arts and Sciences requires one additional GHS course beyond the Carolina Core GHS requirement.

- If the Carolina Core GHS requirement is fulfilled by a **U.S. history** course, the College of Arts and Sciences history requirement must be fulfilled by a **non-U.S. history** course.
- If the Carolina Core GHS requirement is fulfilled by a **non-U.S. history** course, the College of Arts and Sciences history requirement must be fulfilled by a **U.S. history** course.

Please select the College of Arts and Sciences history requirement from the approved list of U.S. and non-U.S. history courses (<https://academicbulletins.sc.edu/undergraduate/arts-sciences/history-requirement/>).

### Social Science and Fine Arts or Humanities (6 hours)

- CLAS 230\*
- PSYC 101\*

## 3. Program Requirements (23-33 hours)

### Supporting Courses (23 hours)

*Must be passed with a grade of C or higher.*

Course	Title	Credits
BIOL 101	Biological Principles I (*)	3
BIOL 101L	Biological Principles I Laboratory (*)	1
BIOL 102	Biological Principles II (*)	3
BIOL 102L	Biological Principles II Laboratory (*)	1
CHEM 111	General Chemistry I (*)	3

CHEM 111L	General Chemistry I Lab (*)	1
CHEM 112	General Chemistry II (*)	3
CHEM 112L	General Chemistry II Lab (*)	1
PHYS 201	General Physics I	3
PHYS 201L	General Physics Laboratory I	1
WGST 113	Women's Health	3

**Total Credit Hours**

**23**

## Cognate or Minor (0-18 hours)

Intensive Clinical Training Program: The 18-month intensive clinical training program replaces the cognate.

An optional minor may be added to a student's program of study. A minor is intended to develop a coherent basic preparation in a second area of study. Courses applied toward general education requirements cannot be counted toward the minor. No course may satisfy both major and minor requirements. All minor courses must be passed with a grade of C or higher. At least half of the courses in the minor must be completed in residence at the University. A list of minor programs of study can be found at Programs A-Z. An optional additional major may also be added to a student's program of study. **Additional majors must include all major courses as well as any prescribed courses noted (\*) in the bulletin.**

Prescribed courses noted in the bulletin may be shared with Carolina Core, College requirements, and Program requirements in the primary program.

A list of minor programs of study can be found at Programs A-Z (<https://academicbulletins.sc.edu/undergraduate/programs-az/>).

## Electives (0-10 hours)

No courses of a remedial, developmental, skill-acquiring, or vocational nature may apply as credit toward degrees in the College of Arts and Sciences. The College of Arts and Sciences allows the use of the Pass-Fail option on elective courses. Further clarification on inapplicable courses can be obtained from the College of Arts and Sciences.

PHYS 202 and PHYS 202L are recommended for pre-med students.

## 4. Major Requirements (51 hours)

*A minimum grade of C is required in all major courses.*

### Major Courses (17 hours)

Course	Title	Credits
BIOL 302	Cell and Molecular Biology	3
BIOL 303	Fundamental Genetics	3
CHEM 333	Organic Chemistry I	3
CHEM 331L	Essentials of Organic Chemistry Laboratory I	1
HSPM 412	Health Economics	3
HSPM 500	Introduction to Health Care Management and Organization	3
SOWK 678	Transforming Health Care for the Future	1

**Total Credit Hours**

**17**

## Major Electives (6 hours)

Course	Title	Credits
Select six hours from the following:		6
BIOL/CHEM 300-699		
<b>Total Credit Hours</b>		<b>6</b>

## CVT Training (28 hours)

Following the academic portion of the Cardiovascular Technology Program, an 18 months clinical training program in an approved facility<sup>1</sup> will be the final stage of the degree program. Students will be awarded 28 credit hours upon completion of the clinical portion of the training.

Students who have already completed a CVT training program or CVT internship will not be eligible for acceptance into this major.

<sup>1</sup> Approved Facilities include: Harry T. Harper, Jr. School of Cardiac and Vascular Technology, Piedmont Augusta, Claude W. Smith, M.D. School of Cardiovascular Technology at Medical University Hospital Authority, Prisma Health, Health Sciences Center, Greenville, Hoffman Heart and Vascular Institute, St. Francis Hospital and Medical Center (Hartford, CT), Piedmont Technical College (Greenwood, SC), Cardiac and Vascular Institute of Ultrasound (Mobile, AL)

## Major Map

A major map is a layout of required courses in a given program of study, including critical courses and suggested course sequences to ensure a clear path to graduation.

Major maps are only a suggested or recommended sequence of courses required in a program of study. Please contact your academic advisor for assistance in the application of specific coursework to a program of study and course selection and planning for upcoming semesters.

**Cardiovascular Technology, B.S.**