

# Cardiovascular Sonography

## Associate in Science Degree Program

**Contact Hours:** 2,175

**Semester Credits:** 89.5

**Instructional Weeks – Full Time:** 80

**Average Time to Complete – Full Time:** 20 Months

## Program Overview

Cardiovascular sonographers use special imaging equipment that directs sound waves into a patient's body (in a procedure commonly known as an ultrasound, sonogram, or echocardiogram) to assess and diagnose various medical conditions.

The Cardiovascular Sonography curriculum integrates didactic and clinical instruction with increasing expectations at each level. Clinical sites utilized by the program are geographically dispersed. Students may have to travel outside of the local area for clinical placements.

## Program Delivery

The Cardiovascular Sonography program is delivered in a blended format. Courses will be delivered entirely online, entirely on-ground or with an appropriate blend of both online and on-ground hours in the same course. Of the 2,175 program hours, a maximum of 775 course hours (35.6%) may be offered online (including general education courses). Campuses may have the option to deliver general education courses either online or on-ground depending on local need and availability specific time, regardless of their eligibility status upon enrollment.

## Program Objectives

To prepare competent entry-level cardiac sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for the following concentration(s) it offers:

- Adult Cardiac Sonography

Graduates of this program will develop skills to:

- Be clinically competent to perform appropriate procedures and record anatomic, pathologic, and/or physiologic data;
- Apply critical thinking and problem-solving skills to exercise discretion and judgment in performance of diagnostic sonography;
- Demonstrate appropriate communication skills; and
- Demonstrate professionalism and growth in the profession.

## Term 1

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
COMM1310	Elements of Human Communication			45 ( 0 / 45 )	0	0	3
MATH1320	College Algebra			45 ( 0 / 45 )	0	0	3
BIOL1405	Anatomy & Physiology			60 ( 0 / 60 )			4

BIOL1131	Anatomy & Physiology VLab			30 ( 0 / 30 )			1
<b>Subtotal</b>				<b>150 (0/150)</b>	<b>30 (0/30)</b>	<b>0</b>	<b>11</b>

## Term 2

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
HPRS1320	Foundations for Health Professionals			45 ( 0 / 45 )	0	0	3
PHYS1311 *	Introductory Physics			45 ( 0 / 45 )	0	0	3
ENGL1310	English Composition I			45 ( 0 / 45 )	0	0	3
PSYC1310	General Psychology			45 ( 0 / 45 )	0	0	3
<b>Subtotal</b>				<b>180 (0/180)</b>	<b>0</b>	<b>0</b>	<b>12</b>

## Term 3

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
CVSG1210	Scanning Lab I	HPRS1320 PHYS1310		0	80 ( 65 / 15 )	0	2.5
DMSG1810	Physics and Instrumentation	HPRS1320 PHYS1310		120 ( 60 / 60 )	0	0	8
ECGY1330	Electrophysiology	HPRS1320 PHYS1310		30 ( 5 / 25 )	30 ( 30 / 0 )	0	3
<b>Subtotal</b>				<b>150 (65/85)</b>	<b>110 (95/15)</b>	<b>0</b>	<b>13.5</b>

## Term 4

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
CVSG1240	Echocardiography Scanning Lab I	DMSG1810 CVSG1210 ECGY1330		0	80 ( 65 / 15 )	0	2.5
CVSG1340	Cardiovascular Pathology	DMSG1810 CVSG1210 ECGY1330		45 ( 20 / 25 )	0	0	3
CVSG1640	Cardiovascular Pathology	DMSG1810 CVSG1210 ECGY1330		90 ( 20 / 70 )	0	0	6
<b>Subtotal</b>				<b>135 (40/95)</b>	<b>80 (65/15)</b>	<b>0</b>	<b>11.5</b>

## Term 5

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
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CVSG2250	Echocardiography Scanning Lab II	CVSG1640 CVSG1240 CVSG1340	0	80 ( 65 / 15 )	0	2.5
CVSG2251	Cardiovascular Pharmacology	CVSG1640 CVSG1240 CVSG1340	30 ( 0 / 30 )	0	0	2
CVSG2850	Echocardiography II	CVSG1640 CVSG1240 CVSG1340	120 ( 20 / 100 )	0	0	8
<b>Subtotal</b>			<b>150 (20/130)</b>	<b>80 (65/15)</b>	<b>0</b>	<b>12.5</b>

## Term 6

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
CVSG2360	Vascular Sonography I	CVSG2850 CVSG2250 CVSG2251		30 ( 5 / 25 )	30 ( 30 / 0 )	0	3
CVSG2760	Cardiovascular Clinical Education I	CVSG2850 CVSG2250 CVSG2251		0	0	320 ( 320 / 0 )	7
<b>Subtotal</b>			<b>30 (5/25)</b>	<b>30 (30/0)</b>	<b>320 (320/0)</b>	<b>10</b>	

## Term 7

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
CVSG2370	Vascular Sonography II	CVSG2360 CVSG2760		30 ( 5 / 25 )	30 ( 30 / 0 )	0	3
CVSG2770	Cardiovascular Clinical Education II	CVSG2360 CVSG2760		0	0	320 ( 320 / 0 )	7
<b>Subtotal</b>			<b>30 (5/25)</b>	<b>30 (30/0)</b>	<b>320 (320/0)</b>	<b>10</b>	

## Term 8

Course #	Course Title	Pre-Requisites	Co-Requisites	Theory Hours (Ground/Online)	Lab Hours (Ground/Online)	Clinical Hours (Ground/Online)	Semester Credit Hours
CVSG2280	Cardiovascular Registry Review	CVSG2370 CVSG2770		30 ( 20 / 10 )	0	0	2
CVSG2780	Cardiovascular Clinical Education III	CVSG2370 CVSG2770		0	0	320 ( 320 / 0 )	7
<b>Subtotal</b>			<b>30 (20/10)</b>	<b>0</b>	<b>320 (320/0)</b>	<b>9</b>	
<b>Total</b>			<b>855 (155/700)</b>	<b>360 (285/75)</b>	<b>960 (960/0)</b>	<b>89.5</b>	

\*For students who start on or after September 18, 2023, this course will change from PHYS1310 to PHYS1311

General education courses (those with prefixes other than CVSG or DMSG) may be scheduled in any term providing that prerequisites are honored. In addition, these courses may be offered 100% online or 100% on ground