

# CARDIOVASCULAR SONOGRAPHY DEGREE PROGRAM

## ADMISSIONS INFORMATION

### **APPLICATION PERIOD: FALL 2024 CLASS**

Deadline: October 1, 2023

Caldwell Community College & Technical Institute  
2855 Hickory Boulevard  
Hudson, North Carolina 28638

### **Program Information**

Cardiovascular sonography is the diagnosis and treatment of patients with diseases of the heart and blood vessels. The primary role of the cardiovascular sonographer is to obtain ultrasound images of the heart and blood vessels for the physician to interpret. The various types of ultrasound equipment require a highly skilled operator to obtain the imaging information required. Students who complete the cardiovascular sonography program will be able to perform noninvasive cardiovascular tests on patients and evaluate the exam to assist a physician in arriving at a diagnosis. Students in the two-year degree program spend time in the classroom as well as getting hands-on experience in a clinical setting to develop an understanding of the anatomy, physiology, pathology, and disease testing of the cardiovascular system. Cardiovascular sonography requires good eyesight, hearing, manual dexterity, verbal communication skills, and ambulatory skills.

Applicants may complete non-CVS and non-SON courses prior to acceptance into the program.

**The CVS program is offered on the Caldwell Campus in Hudson, NC. Some cardiovascular sonography classes meet in the evening with clinical placement during the day. Applicants should be aware that travel in out-of-service areas may be required for field work.**

*To insure the public health and safety of all clients, many of our clinical affiliation sites require personal criminal background checks and /or drug screening in order for the student to participate in clinical education at that site.*

*Most disciplines of Health Sciences require registration, certification or licensure to practice in the health care field. Most examining boards require proof of good moral character to apply to take the registration, certification or licensure examination. If you have further questions, please contact the American Registry of Diagnostic Medical Sonographers at 1-800-541-9754.*

### **Admissions Process**

Cardiovascular Sonography is a two-year associate degree program with a limited class size. Acceptance into the program is first-come, first-served based upon completion of ALL admissions requirements. Approximately 7-9 students are accepted into the program each year from a waiting list. Other eligible students remain on a waiting list for future admittance **Students are notified of their acceptance during the month of October to begin the program the following August.**

**\*\*\*Refer to NOTIFICATION PROCEDURE section of this document for more details\*\*\***

## Admission Requirements

The following requirements must be completed before an applicant can be added to the waiting list for acceptance to the program.

### 1. CCCTI application

Applications are available on-line at [www.cccti.edu](http://www.cccti.edu).

### 2. Official documentation of high school graduation/high school equivalency

A high school graduate should request an official transcript to be sent to CCC&TI indicating date of graduation. This is required even if the applicant holds a college degree.

Applicants with a high school equivalency must provide official documentation to CCC&TI from the granting institution.

Reproduced copies of documents are not acceptable.

### 3. Official transcripts of any college work

The applicant should request colleges to mail transcripts directly to CCC&TI.

If currently enrolled at another college, request a transcript now and another one at the completion of courses.

College transcripts must be received and evaluated in order to determine placement test exemption and/or awarding of college transfer credit.

### 4. Information session

Review the Sonography Information Session on the college webpage to receive current details regarding admission, academic, and program requirements.

The Information Session is located at this link from the sonography program webpage:

<https://www.cccti.edu/SON/SONInfoSession.asp>.

**To receive credit for this requirement**, complete the Sonography Confirmation form at the end of the information session. This completed form will automatically be emailed to Ruthie Price once you click the submit button.

### 5. Clinical Site Visit

This visit is intended to familiarize the applicant with the actual day-to-day responsibility of a person employed in cardiovascular sonography.

The applicant must contact Brandon Harmon at 828-726-2612 or [bharmon@cccti.edu](mailto:bharmon@cccti.edu) for an appointment at a clinical site used by CCCTI.

**Please remember that visits are scheduled by Health Science Admissions on dates and times that are convenient for the clinicians and in the order that requests are received.**

### 6. Interview

The applicant must complete an interview with the program director.

A required criminal background check **acknowledgment statement** must be signed by the applicant during the interview for the interview requirement to be considered completed.

Please make your appointment directly with Robin Nichols, Program Director at 828-726-2323 or [michols@cccti.edu](mailto:michols@cccti.edu)

### 7. Prerequisite Courses

The following prerequisite courses must be completed with a grade of "C" or higher.

- ACA 115 Success & Study Skills
- BIO 163 Basic Anatomy & Physiology (may substitute BIO168 &169 together)
- ENG 111 Writing and Inquiry
- MAT 121 Algebra/Trigonometry I (may substitute MAT 171)
- PHY 110 Conceptual Physics (may substitute PHY 151)
- PHY 110A Conceptual Physics Lab

## **8. MAR (Minimum Admissions Requirements) Review**

Contact the Health Sciences Admissions Office to request the MAR Review as soon as ALL the above admissions requirements (steps 1-7) have been completed. During the MAR Review, the Health Sciences Admissions Office will review your file for completion. If all admissions requirements have been met, you will be assigned a consideration date which determines the order in which students are accepted. Request the MAR review by contacting one of the following:

Last Names A-F	Amy Huffman 828.726.2710 or <a href="mailto:ahuffman@cccti.edu">ahuffman@cccti.edu</a>
Last Names G-L	Cristina McLaughlin 828.726.2704 or <a href="mailto:cmclaughlin@cccti.edu">cmclaughlin@cccti.edu</a>
Last Names M-Z	Ruthie Price 828.726.2711 or <a href="mailto:rprice@cccti.edu">rprice@cccti.edu</a>
Watauga Campus	Movita Hurst 828-297-3811 *5200 or <a href="mailto:mhurst@cccti.edu">mhurst@cccti.edu</a>

**NOTE:** When considering whether to admit an individual into a specific program of study, the College shall take into account that federal law prohibits states from granting professional licenses to undocumented immigrants. Furthermore, graduation from a CCC&TI health science program alone does not guarantee that the student has met all eligibility requirements for licensure, certification, or registry required in order to practice in the related medical field. Prospective students should contact the appropriate agency prior to enrollment if they have any questions concerning their eligibility for credentialing examinations and legal ability to practice.

**The CVS consideration date is given after completing ALL ADMISSIONS REQUIREMENTS.**

### **NOTIFICATION PROCEDURE**

The students with the earliest consideration dates will be notified of acceptance to the 2024 Cardiovascular Sonography Program in October of 2023. Additionally, other complete applicants will be notified via mail of either “alternate” or “complete” status. All complete students must respond to their notification letter by the established deadline communicated within the letter to secure their position on the waiting list. Complete applicants may be considered (by order of consideration date) if an accepted student declines or is disqualified before the start of the program.

All other cardiovascular sonography applicants who were incomplete with admissions requirements at that time will receive notification of his/her admission status via CCCTI student email accounts during October each year. The notification will require a student response to keep their CVS application pending for the next application period.

**Caldwell Community College & Technical Institute**  
**Sonography Programs Technical Standards**

**Technical Standard I: Observation**

- Students must be able to observe demonstrations and participate in physical examination sessions, clinical skills workshops, observe the difference of normal versus pathological states. They must be able to obtain a medical history and perform a complete physical examination in order to integrate findings based on these observations and to develop an appropriate diagnostic and treatment plan.
- Students must have sufficient visual acuity to read sonography prescriptions and patient charts, observe conditions of the patient and evaluate sonographic images.
- Students are required to adequately view sonograms, including color distinctions and shades of gray.
- Students must have the ability to perceive pertinent detail in objects or in pictorial or graphic material; to make visual comparisons and discriminations and see slight differences in shape, contour and texture of organs and vascular structure; to comprehend forms in space and understand relationships of plane and solid objects; the ability to visualize objects of two or three dimensions.
- Students must be able to use auditory, tactile and visual senses to assess the physiological status of the patient.

**Technical Standard II: Communication**

- Students must be able to communicate effectively and sensitively with patients, their families, and members of the health team. Students must be able to communicate effectively with patients from different social and cultural backgrounds, as well as develop effective professional rapport with patients and co-workers. Students must be able to record examination and diagnostics results clearly, accurately and efficiently. Students must be able to communicate effectively in English with patients, family and other health care professionals in a variety of patient settings.
- Students must have sufficient auditory perception to receive verbal communication from patients and members of the healthcare team to obtain and record an accurate patient history and to assess the health needs of people through the use of monitoring devices such as intercom systems, cardiac monitors, respiratory monitors and fire alarms.
- Students must have sufficient communication skills in English (verbal, reading, writing) to interact with individuals and to communicate their needs promptly and effectively, as may be necessary in the patient's/client's interest, collaborate with physicians and other members of the healthcare team, and provide an oral or written summary of the technical findings to the physician for medical diagnosis.
- Students must be able to read, write and communicate effectively in English.

**Technical Standard III: Motor**

- Students must possess the capacity to perform physical examinations and diagnostic maneuvers. They must be able to respond to emergency situations in a timely manner and provide general and emergency care. They must possess adequate sensory function and motor coordination to fulfill minimum competency objectives for inspection, palpation, percussion and auscultation necessary to perform a physical examination. They must possess sufficient postural control, neuromuscular control and eye-to-hand coordination in order to utilize standard medical/surgical instruments to participate in the inpatient and outpatient setting and other clinical activities.
- Students must have sufficient gross and fine motor coordination to respond promptly and to implement skills related to the performance of sonographic imaging examinations and/or cardiovascular procedures, such as positioning and transporting patients and obtaining diagnostic images. Sonographers must be able to manipulate sonographic equipment in order to achieve diagnostic images. • Must successfully complete and maintain CPR certification
- Students must be able to lift, transfer and/or assist patients from wheelchair/stretchers to exam table
- Students must be able to lift, move, reach, push or pull heavy equipment on wheels (up to 500 lbs.)
- Students must be able to perform and sustain repeated bending, stretching, stooping, kneeling, reaching overhead, sitting and standing
- Students must have the manual dexterity and coordination to manipulate small knobs and toggle switches and control accessory equipment.
- Students must have the manual dexterity and coordination to manipulate equipment to respond to patient safety
- Students must have the ability to maintain prolonged arm positions necessary for scanning
- Students must be able to perform their job duties while standing on their feet 80% of the time.

**Technical Standard IV: Intellectual-Conceptual, Integrative and Quantitative Abilities**

- Students must be able to learn through a variety of modalities including, but not limited to, classroom instruction; small group, team and collaborative activities; individual study; preparation and presentation of reports; and use computer technology. Students must have the mental capacity to assimilate and learn a large amount of complex, technical and detailed information in order to formulate diagnostic and therapeutic plans.

- Students must have sufficient intellectual and emotional function to plan and implement quality patient care, analyze technical information, and use independent judgment in recognizing the need to extend the scope of the procedure according to the diagnostic findings.
- Students must be able to demonstrate the ability to integrate diagnostic sonograms, laboratory results, patient history and medical records and adapt sonographic examinations as necessary.
- Students must be able to demonstrate the ability to organize and accurately perform the individual steps in a sonographic procedure in the proper sequence.
- Students must be able to demonstrate the ability to read and extract information from the medical chart or patient requisitions.
- Students must be able to demonstrate the ability to explain the clinical study verbally and/or in writing.

**Technical Standard V: Behavioral and Social Attributes**

- Students must have the emotional stability to function effectively under stress and to adapt to an environment that may change rapidly, without warning, and/or in unpredictable ways. They must accept responsibility for learning, exercising good judgment, and promptly completing all responsibilities attendant to the diagnosis and care of patients. They must understand the legal and ethical standards of the medical profession.
- Students must be able to work effectively, respectfully and professionally as part of the healthcare team, and to interact with patients, their families, and health care personnel in a courteous, professional, and respectful manner.
- Students must be able to contribute to collaborative, constructive learning environments; accept constructive feedback from others; and take personal responsibility for making appropriate positive changes. Technical Standard VI: Ethical and Legal Standards
- Students must be able to understand the basis and content of both general and medical ethics. The student must possess attributes that include compassion, empathy, altruism, integrity, responsibility, and tolerance. Students must be able to recognize limitations in their knowledge, skills and abilities and to seek appropriate assistance with their identified limitations. Students whose performance is impaired by abuse of alcohol or other substances are not suitable candidates for admission, promotion, or graduation. In addition, should the student be convicted of any felony offense while in the Health Sciences & Nursing Programs, they agree to immediately notify the program as to the nature of the conviction. Failure to disclose prior or new offenses can lead to disciplinary action that may include dismissal.

Caldwell Campus Disability Services  
Telephone: 828-726-2746

Watauga Campus Disability Services  
Telephone: 828-297-3811 ext. 5263

**AFTER ACCEPTANCE** – At the time an applicant receives their acceptance notification letter, the following requirements will be expected. Failure to submit proper and complete documentation by the deadlines specified will result in forfeiture of their seat in the class.

**1. Physical examination.**

- An accurate and satisfactory student medical form (health form), which includes appropriate documentation of immunizations by the health care provider or county health department and physical exam results, must be submitted to Certified Background Check Medical Document Management by the deadline stated in the acceptance letter. **Each student will be responsible for the cost of the electronic health form tracking.** Requirements include current TB (2 step PPD) skin test (within 12 months), mumps/measles/rubella blood titer or vaccine, proof of chicken pox immunity by vaccination or blood titer, and current immunizations for tetanus and diphtheria. It is required to complete and submit a COVID-19 vaccination status form. More information about this form and how to access it are at the provided link under Vaccination Protocols: <https://www.cccti.edu/COVID-19/Default.asp>. The student is also encouraged to obtain Hepatitis B immunizations. Otherwise, the decision to decline the Hepatitis B immunizations must be formally documented.

**2. Infant, Child and Adult CPR certification.**

- One of the following is required: American Heart Association Basic Life Support Provider course OR American Red Cross Professional Rescuer or Healthcare Provider OR National Safety Council Healthcare Provider. A copy of the CPR certification should be submitted by the **deadline established by the program director.**

**3. Criminal background checks/Drug screening/ other expectations.**

- Criminal background checks and/or drug screenings are required for the student to participate in the clinical component of each CVS/SON course. **A signed acknowledgement statement must have been submitted to the Health Sciences Admissions office as an admissions requirement** (a copy of the form will be given to the applicant to sign during the interview with the program director – see admissions requirement #5). All costs associated with criminal background checks and drug screenings are the responsibility of the student.
- The student will assume responsibility for all health care or emergency room costs they might incur during their clinical rotations. **Students are required to obtain health insurance coverage before being allowed to attend clinical and must maintain insurance coverage throughout the program.**
- The student will assume the responsibility for travel to and from the clinical site and all associated costs.
- The student will complete a final evaluation of all clinical rotation sites, including faculty and educational experience.

**4. Progression Policy**

The sonography student must demonstrate an acceptable level of competency by earning a grade of “C” or better in all general education and CVS/SON-prefixed courses. *Clinical Education Courses (noted with an asterisk in the Curriculum Guide below) require an 85 or better to progress.* Failure to maintain these program standards will result in student dismissal from the program. Refer to the Sonography Program Guide for further details.

***Please note: Each applicant is responsible for:***

- *completing admission requirements,*
- *confirming receipt of letters and documents in the admissions office*
- *keeping CCCTI informed in writing of any personal information changes*
- *keeping copies of all documentation submitted to CCCTI*

## Curriculum for Cardiovascular Sonography (A45160)

Semester	Course Number	Class Name	Class	Lab	Credit
<b>Prerequisites</b>	ACA 115	Success & Study Skills <b>or</b>	0	2	1
	ACA 122	College Transfer Success			
	BIO 163	Basic Anatomy and Physiology	4	2	5
	ENG 111	Writing and Inquiry	3	0	3
	MAT 121	Algebra/Trigonometry I	2	2	3
	PHY 110	Conceptual Physics	3	0	3
	PHY 110A	Conceptual Physics Lab	0	2	1
			<b>12</b>	<b>8</b>	<b>16</b>
<b>Fall I</b>	*CVS 160	CVS Clinical Education I	0	13	5
	CVS 163	Echo I	3	2	4
	COM 120	Intro Interpersonal Communication	3	0	3
			<b>6</b>	<b>15</b>	<b>12</b>
<b>Spring I</b>	*CVS 161	CVS Clinical Education II	0	24	8
	CVS 164	Echo II	3	2	4
	SON 111	Sonographic Physics	3	3	4
			<b>6</b>	<b>29</b>	<b>16</b>
<b>Summer I</b>	*CVS 162	CVS Clinical Education III	0	15	5
			<b>0</b>	<b>15</b>	<b>5</b>
<b>Fall II</b>	*CVS 260	CVS Clinical Education IV	0	24	8
	SON 250	Vascular Sonography	1	3	2
	HUM/FA	Humanities/Fine Arts Elective	3	0	3
			<b>4</b>	<b>27</b>	<b>13</b>
<b>Spring II</b>	*CVS 261	CVS Clinical Education V	0	24	8
	CVS 277	Cardiovascular Topics	2	0	2
	PSY 150	General Psychology	3	0	3
			<b>5</b>	<b>24</b>	<b>13</b>
<b>Total</b>			<b>33</b>	<b>118</b>	<b>75</b>

## Estimated Cardiovascular Sonography Program Costs

Expense	Amount	Due
Tuition*	\$76.00 per semester hour + \$35 per fall/spring semester activity fee+ \$2 per course campus service fee plus associated course fees	Each semester
Liability (Malpractice) Insurance	\$13.00 x 2 = \$26.00	Each Fall semester
Accident Insurance	\$6.00 x 2 = \$12.00	Each Fall semester
Criminal Background Check, Drug Screen, Immunization Tracker	\$143.75 (additional costs vary)	First Fall semester with additional updates as required by clinical sites
Graduation Fee	\$25.00	Spring semester
Uniforms	Approximately \$200 to \$250.00	First Fall semester
Certification exam**	\$250 Adult Echo Examination (paid to ARDMS)	Second Spring semester
Textbooks	Approximately \$1080.00 for Sonography program + general education texts	Most of this expense will be incurred in the first Fall semester
Travel	Varies	Students are responsible for travel to and from school and clinical sites plus any parking fees Students are responsible for travel for field trips and community service projects.

\* May be subject to change without notice as determined by the General Assembly of North Carolina

\*\*Subject to change without notice as determined by ARDMS

### **For additional information, please contact:**

Ruthie Price, B.A.  
Coordinator, Health Sciences Admissions  
828-726-2711  
Fax: (828) 726-2709  
E-mail: [rprice@cccti.edu](mailto:rprice@cccti.edu)

Amy Huffman, B.A.  
Director, Admissions and Academic Planning  
828.726.2710  
Email: [ahuffman@cccti.edu](mailto:ahuffman@cccti.edu)

Movita Hurst (Watauga Campus)  
Counselor, Student Services  
828-297-3811 \*5200  
[mhurst@cccti.edu](mailto:mhurst@cccti.edu)

Robin Nichols, BS, RDMS, RV  
Program Director, Sonography Programs; Instructor  
828-726-2323  
[nichols@cccti.edu](mailto:nichols@cccti.edu)

*Since health program standards are mandated by accrediting and regulatory agencies, revisions to the above information may be necessary. Efforts will be made to keep changes to a minimum and finalized one year in advance of the starting date of the program; however, the college reserves the right to revise any part or section as necessary.*