



COLLEGE CATALOG

ADDENDUM B

2020 – 2021



316 Main Street • Newport News, VA 23601-3814
(757) 240-2200 • (757) 240-2225 Fax • www.riverside.edu

RIVERSIDE COLLEGE OF HEALTH CAREERS

316 Main Street
Newport News, VA 23601

757-240-2200
757-240-2225 – Fax

Campus Administrator: Dr. Robin Nelhuebel

Website

www.riverside.edu

Riverside College of Health Careers is certified to operate in the Commonwealth of Virginia by the State Council of Higher Education for Virginia (SCHEV).

The College is institutionally accredited by the Accrediting Bureau of Health Education Schools (ABHES)

This institution is approved to offer GI Bill® educational benefits by the Virginia State Approving Agency.

Original Catalog Publication Date: May 25, 2020

Addendum B Publication Date: March 1, 2021

(Addition of Cardiovascular Technology Program)

This Catalog is for informational purposes only and does not create a contract, nor does it constitute a guarantee of continued enrollment. Riverside College of Health Careers continuously attempts to improve each program and reserves the right to modify admission criteria, curriculum, course content, and policies as deemed necessary. Policy references are for public information purposes only. Enrolled students should refer to the most current policies published in their online course management system as needed.

Cover photo: College Administration Building.

Back cover photos clockwise from top left: students in front of Ruby Pope Drumm Health Sciences Library; student study group on the campus lawn; students in front of the classroom building; students relaxing in the Treehouse Café.

Cardiovascular Technology Program with Adult Echocardiography Specialty (ECHO)

Cardiovascular Technology (CVT) consists of multiple specialties within the profession; invasive cardiovascular technology, adult echocardiography, pediatric echocardiography, non-invasive vascular technology and cardiac electrophysiology. Members in the Cardiovascular Technology profession work with physicians in the diagnosis and treatment of cardiovascular disease. The Adult Echocardiographer performs cardiac ultrasounds, exercise and pharmacologic stress testing, and assists with transesophageal, intra-cardiac and intra-operative procedures to provide physicians with the analytical information needed for diagnosis and treatment.

The Riverside Cardiovascular Technology Program was established in 2021 as a one year certificate program. An Associate degree in a health related field is a prerequisite requirement. The program curriculum includes a thorough study of ultrasound physics, Echocardiography Technology, skills laboratory time, and over 800 hours of clinical practice.

Students are required to challenge the Sonography Principles and Instrumentation (SPI) exam and the Adult Echocardiography (AE) exam with the American Registry of Diagnostic Medical Sonography (ARDMS) prior to graduation.

WHAT WE OFFER

- Full-time Day option consisting of two 16-week semesters and one 8-week summer semester in addition to specified College-level prerequisite preadmission courses
- Theoretical instruction integrated with laboratory simulations and clinical experience
- Hands-on clinical experience in our modern medical center and a variety of affiliated clinical sites
- Financial aid for students who qualify
- Career Planning
- Low Instructor-Student ratio

PROGRAM MISSION

The mission of the Cardiovascular Technology Program – Adult Echocardiography Specialty is to graduate competent, entry-level Cardiovascular Technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for adult echocardiography who are prepared to challenge the industry registry exam, earn their credential and gain employment in the field.

COURSE DELIVERY METHODS

The majority of courses in this program are delivered on-site with web enhancement via our learning management system. Some courses have an online component. The courses are designated as either residential (on campus) or blended (on campus and online).

CLINICAL WORK DURING ENROLLMENT

The College recognizes a student's right to attain employment. Enrolled students who are employed may not represent themselves as students during hours of employment. They may not wear their student uniform or student identification badge.

PROGRAM GOALS & STUDENT LEARNING OUTCOMES

1. Students will be clinically competent.
 - Students will perform echocardiograms and accurately complete preliminary report.
 - Students will recognize normal from abnormal echocardiograms.
 - Students will appropriately respond to emergent situations.
2. Students will demonstrate communication skills.
 - Students will identify the diversity of patients and communicate appropriately.
 - Students will demonstrate respectful written and oral communication with patients, members of the care team, and their peers.
3. Students will implement critical thinking skills.
 - Students will integrate the individual needs of each patient based on their medical history and physician's order into the study being performed.
 - Students will incorporate their knowledge of ultrasound and cardiac pathology by modifying study being performed as required by protocol.
4. Students will model professionalism.
 - Students will participate in the care of the patient as a member of a collaborative healthcare team.
 - Students will display professionalism in relationships with physicians, team members, and the public.
 - Students will display ethical behavior and comply with patient privacy laws.

CVT-ECHO Program, cont.

PROGRAMMATIC ACCREDITATION

PENDING

CREDENTIALING

Students are required to challenge the Sonography Principles and Instrumentation (SPI) Examination and the Adult Echocardiography (AE) Examination with the American Registry of Diagnostic Medical Sonography (ARDMS) prior to graduation. Further information may be obtained from:

American Registry of Diagnostic Medical Sonography (ARDMS)
1401 Rockville Pike, Suite 600, Rockville, MD 20852-1402
800-541-9754 FAX 301-738-0312 www.ardms.org

INSTITUTIONAL CERTIFICATION

Certified to operate in Virginia by the State Council of Higher Education for Virginia (SCHEV).

SCHEV
101 N. 14th Street, James Monroe Building, Richmond, VA 23219
804-225-2600 www.schev.edu



State Council of
Higher Education for Virginia

INSTITUTIONAL ACCREDITATION

Accrediting Bureau of Health Education Schools (ABHES)
7777 Leesburg Pike, Suite 314 N., Falls Church, VA 22043
703-917-9503 www.abhes.org



RIVERSIDE REGIONAL MEDICAL CENTER ACCREDITATION

DNV GL - Healthcare
400 Techne Center Drive, Suite 100, Milford, OH 45150
www.dnvglhealthcare.com

CVT-ECHO, cont.

COURSE DESCRIPTIONS

Complete course sequencing, clock hours, and semester credit hours (CR) awarded are shown on the Curriculum Plan page at the end of the program section. Occasional evening and weekend hours may be required.

LEVEL ONE

CVT 311 – INTRODUCTION TO CARDIOVASCULAR TECHNOLOGY (1 CR): This blended course will introduce the student to the careers in Cardiovascular Technology. Topics covered will include basic cardiac anatomy, basic exam techniques, patient positioning, and proper ergonomic practices. The student will be introduced to the process of registry exams, professional societies, lab accreditation and the importance of continuing medical education (CME). Instruction in professionalism and employment opportunities will be discussed. An orientation to the clinical environment will be provided. Fire safety and campus security will be discussed.

CVT 321 – ECG AND OTHER PROCEDURES (2 CR): This blended course is designed to give the student an understanding of electrocardiographic (ECG) interpretation. Normal cardiac anatomy, cardiac circulation, and the electrophysiology of the heart will be covered. Topics include correct placement of ECG leads, components of an ECG tracing, normal and abnormal tracings. Other procedures to be covered include stress testing, transesophageal echocardiography, intra-operative and interventional studies.

CVT 341 – ACOUSTIC OR ULTRASOUND PHYSICS (3 CR): This blended course explores the theory of ultrasound physics. The acoustic variables and acoustic parameters of sound waves, sound wave propagation, resolution and attenuation will be introduced. The bioeffects of ultrasound will be discussed. Ultrasound imaging and instrumentation to include various transducers, pre- and post-processing images will be reviewed. Other topics presented are hemodynamics and principles of Doppler.

ECH 331 – ECHOCARDIOGRAPHY TECHNOLOGY I (3 CR): This course is designed to give the student a thorough look at the anatomy and physiology of the human heart to include coronary artery distribution. The student will be introduced to the complete 2D echocardiogram with color and spectral Doppler, ultrasound instrumentation, routine measurements and calculations. Topics covered will include cardiac anatomy, embryology, the cardiac

cycle, hemodynamics, and ventricular systolic function. Cardiomyopathy, valve disease, pericardial disease, cardiac tumors and masses will be covered.

ECH 331L – ECHOCARDIOGRAPHY TECHNOLOGY I LAB (1 CR): This skills laboratory-based course is a complement to Echocardiography Technology I. In this course students will learn the practice of echocardiography. Students will study proper patient positioning, ergonomics, ultrasound cart instrumentation, and how to perform the complete basic 2D echocardiogram to include M-mode, color/spectral Doppler and routine measurements.

LEVEL TWO

ECH 302C – ECHOCARDIOGRAPHY CLINICAL I (9 CR): This clinical course will allow the student to demonstrate their knowledge and put their skills into practice in the clinical setting with the supervision and guidance of a clinical preceptor. The student will participate as part of a healthcare team. Clinical experiences will take place at multiple echocardiography laboratories that are affiliated with the college. Successful completion of Clinical Experience I includes adherence to attendance policies, evaluations, and paperwork submission. Progressive clinical competencies include individual views culminating in a basic complete 2D echocardiogram.

ECH 332 – ECHOCARDIOGRAPHY TECHNOLOGY II (3 CR): This course will explore more in-depth calculations to evaluate the heart. Provocative maneuvers, cardiac transplant, effects of systemic diseases, and contrast in echocardiography will be presented. Simple and complex congenital heart disease and the related surgeries will be covered. The student will learn about additional techniques such as 3D echocardiography, strain, imaging ventricular assist devices (VAD) and imaging with cardiac resynchronization therapy (CRT). The student will also be introduced to other modalities such as nuclear medicine, cardiac catheterization and electrophysiology.

ECH 332L – ECHOCARDIOGRAPHY TECHNOLOGY II LAB (1 CR): This skills laboratory-based course is designed to complement Echocardiography Technology II. The student will continue to increase efficiency in performing echocardiograms in the laboratory setting. More complex measurements and techniques to include PISA, strain, Pedoff probe, and stress echo will be introduced. Scanning methods for 3D echocardiography, evaluation of VADs and CRT will be explored.

CVT-ECHO, cont.

LEVEL THREE

ECH 303C – ECHOCARDIOGRAPHY CLINICAL II (10 CR): This clinical course will allow the student to integrate their knowledge and skills into practice in the clinical setting with the supervision and guidance of a clinical preceptor. The student will play an active role as part of the healthcare team. Clinical experiences will take place at multiple echocardiography laboratories that are affiliated with the college. Successful completion of Clinical Experience II includes adherence to attendance policies, evaluations, and paperwork submission. Clinical competencies include a complete basic 2D echocardiogram with left ventricular quantification, assessment of aortic and pulmonary stenosis and insufficiency,

tricuspid and mitral stenosis and regurgitation, accurate acquiring of strain, accurate completion of a preliminary report, and transesophageal echocardiogram.

ECH 399 – CAPSTONE (2 CR): The Capstone course is designed to prepare the student for successfully passing the national exam with the American Registry for Diagnostic Medical Sonographers (ARDMS) through review and a final exam. The student will present a clinical case study. The student will also prepare to enter the workforce by refining their résumé and practicing interviewing techniques.

CURRICULUM PLAN

LEVEL 1	A	CS	CE	Clock Hours	Credit Hours
CVT 311 Introduction to Cardiovascular Technology	15			15	1
CVT 321 ECG & Other Procedures	30			30	2
CVT 331 ECG Technology I	45			45	3
CVT 331L ECG Technology I Lab		45		45	1
CVT 341 Acoustic or Ultrasound Physics	45			45	3
TOTAL LEVEL HOURS	135	45		180	10

LEVEL 2	A	CS	CE	Clock Hours	Credit Hours
ECH 332 ECG Technology II	45			45	3
ECH 332L ECG Technology II Lab		45		45	1
ECH 302C ECG Clinical I			405	405	9
TOTAL LEVEL HOURS	45	45	405	495	13

LEVEL 3	A	CS	CE	Clock Hours	Credit Hours
ECH 303C ECG Clinical II			450	450	10
ECH 399 Capstone	30			30	2
TOTAL LEVEL HOURS	30	0	450	480	12

PROGRAM SUMMARY	Clock Hours	Credit Hours
Program Hours – Theory	210	14
Program Hours – Skills Lab	90	2
Program Hours - Clinical	855	19
Total Program Hours	1155	35

A = Academic Instructional Hour 15 hours/1 credit
CS = Skills Lab Instructional Hour 45 hours/1 credit
CE = Clinical Experience Hour 45 hours/1 credit

Student Accounts Information

2020-21 TUITION & FEES

Tuition Rates Effective Fall 2020

The College reserves the right to change tuition and other fees as deemed necessary. Incremental tuition increases are generally made at the beginning of the fall semester if applicable. Tuition & Fees information current at date of document publication. Updated information available on the College website at www.riverside.edu. A \$30.00 charge will be assessed for returned checks. * Fees and expenses charged by an external service provider are the responsibility of the applicant/student and are not covered in the College's applicant processing fee or tuition.

ENTRANCE FEES

- Applicant Processing Fee -- \$100.00
*Fee is non-refundable and due upon application submission.
Current Riverside employees are eligible for a 25% discount off this fee!*

FEES APPLICABLE TO ACCEPTED STUDENTS

- Tuition Deposit -- \$125.00
Fee is non-refundable and credited towards first semester tuition.
- Background Screening, Drug Testing, Immunization & Medical Records Management Estimate* -- \$121.00
- CPR Course Estimate* -- \$65.00
Only the American Heart Association BLS for the Healthcare Provider will be accepted.
- Student Resource Fee - \$100.00
- Campus Parking - \$10

TUITION: CARDIOVASCULAR TECHNOLOGY PROGRAM – ADULT ECHO SPECIALTY

\$350 per CVT credit	
\$350 per ECH credit	
Total Tuition*	\$12,250

Book Estimate:	\$350
Uniform & Shoe Estimate:	\$150
Supplies Estimate:	\$50
Credentialing Estimate:	<i>included in tuition (1st attempt)</i>

AUDIT / TRANSFER STUDENT FEES

- Audit Fee -- \$50.00 per credit
See policy for details regarding course eligibility.
- Transfer Evaluation Fee -- \$100.00
Fee is non-refundable; waived for current or former military members.

*The Total Tuition does not include prerequisite courses, entrance fees, textbooks, supplies, uniforms, or living expenses. Textbook, supplies, uniform, and living expenses are reflected in the student budgets available through the Financial Aid Coordinators. Textbook and uniform prices vary according to the vendor. The amounts provided are estimates.

Additional Program Costs Related to Clinical Placements

Students are responsible for all costs incurred in travel to assigned clinical sites. Clinical site requirements may vary. Students are responsible for meeting these requirements which may include, but are not limited to: fees for drug screens, repeated criminal history background checks, and/or additional immunizations.

Admission Criteria

PREREQUISITE COURSES*:

Anatomy and Physiology with Lab	4 Credits
English Composition	3 Credits
College Math (any 100-level or higher)	3 Credits
Psychology: Gen, Intro, or Developmental	3 Credits
General or Conceptual Physics	3 Credits
Medical Terminology	2 Credits

***All prerequisite courses must be completed before a formal application can be submitted and reviewed.**

ADDITIONAL ADMISSION CRITERIA:

- The applicant must be a graduate of an accredited high school with a GPA of 2.0 or higher or have earned a high school equivalency (GED) certificate.
- Cumulative college-level GPA of 2.5 or higher is recommended.
- The applicant **must** hold a minimum of an Associate degree in a healthcare discipline with a current associated credential.*
- Prospective students for the Cardiovascular Technology – Adult Echocardiography Specialty with prior criminal offenses are urged to review the American Registry for Diagnostic Medical Sonographers (ARDMS) Compliance Policies and/or contact ARDMS to verify eligibility for obtaining credentials.

**Students currently enrolled in a health-related program may submit an application provided they are in good standing and expected to graduate before the first scheduled day of the Cardiovascular Program.*

Academic Calendar

SUMMER SEMESTER 2021

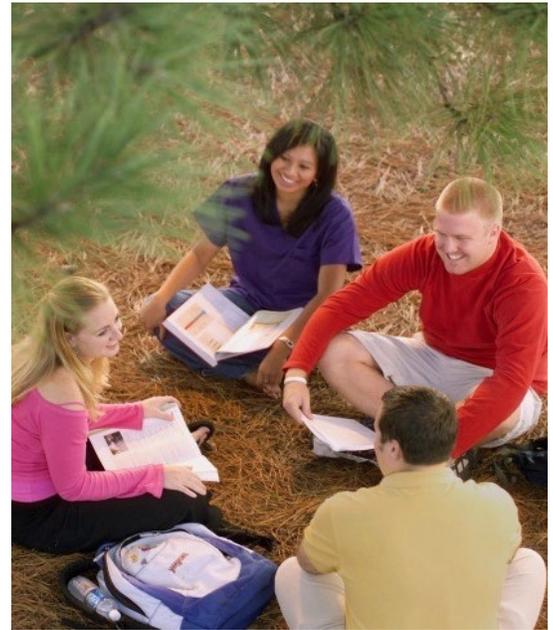
Semester Begins: May 17
Last Day to Add/Drop: May 28
College Closed: May 31
(Memorial Day)
College Closed: July 5
(Independence Day)
Semester Ends: July 14
Student Break: July 15 to August 13

FALL SEMESTER 2021

Semester begins: August 16
Last Day to Add/Drop: August 27
College Closed: September 6
(Labor Day)
Student Break: October 11-12
No Classes November 25-26
(Thanksgiving)
Semester Ends: December 7
Student Break: Dec. 7 to Jan. 7
College Closed: December 25
(Christmas)

SPRING SEMESTER 2022

College Closed: January 1
(New Year's Day)
Semester Begins: January 10
Last Day to Add/Drop: January 21
Student Break: March 7-11
Semester Ends: April 29
Student Break: May 2-13



Please stop by...we would love to show you our campus!

