

# Bachelor of Science Degree in Cardiopulmonary Sciences (BSCARDIO)

2020 – 2021

Admission requirements are subject to change. Please check for any admission updates:

[valenciacollege.edu/west/health/admissionupdates.cfm](http://valenciacollege.edu/west/health/admissionupdates.cfm)

## Priority Application Deadline

July 1<sup>st</sup>  
November 1<sup>st</sup>  
March 1<sup>st</sup>

## Classes Begin\*

Fall Term - August  
Spring Term - January  
Summer Term - May

## ABOUT THIS LIMITED-ACCESS PROGRAM

The **Cardiopulmonary Sciences** Bachelor of Science (B.S.) degree at Valencia College provides an opportunity for A.S. degree Respiratory Therapists (RRT) and Cardiovascular Technologists (RCIS or RCES) to further their education and increase their potential for career advancement. The curriculum offers advanced courses in the cardiopulmonary system, the healthcare system and an introduction to research, leadership and education. See the Concentration options that follow in this document.

Valencia's B.S. Cardiopulmonary Sciences (BSCARDIO) degree program is a limited access program and admission to Valencia does not guarantee acceptance to the program. Program applicants must also submit a School of Allied Health BSCARDIO Program Application and be accepted to the program. Applicants must hold an eligible degree from a regionally accredited institution and a current eligible professional credential from NBRC, CCI or ARDMS. Students are admitted to begin the program each term and applications are accepted on an ongoing basis. ***Although an application submitted prior to a priority application deadline is more likely to be processed for the upcoming term, applications can be submitted after the priority deadline.*** This is basically an online program designed for working professionals; some courses may require on-site testing and a few courses may be on-site, depending upon the concentration selected. **Students must complete at least 32 required degree credits at Valencia to be awarded this degree.**

\* <https://valenciacollege.edu/academics/calendar/>

## PROGRAM ADMISSION AND ACCEPTANCE CHECKLIST

- \_\_\_\_\_ 1. Be a U.S. citizen or a U.S. permanent resident or in a non-immigrant category other than F or J visa categories.
- \_\_\_\_\_ 2. Review this BSCARDIO program guide and the overview and program requirements in the online Valencia catalog:  
[catalog.valenciacollege.edu/degrees/bachelorofscience/astobscardiopulmonarysciences/](http://catalog.valenciacollege.edu/degrees/bachelorofscience/astobscardiopulmonarysciences/).
- \_\_\_\_\_ 3. Submit a completed Valencia application for admission using the *Bachelor's Degree & ATC* application ([valenciacollege.edu/admissions-records/forms.cfm](http://valenciacollege.edu/admissions-records/forms.cfm)) and be in Active student status. First-time Valencia bachelor's program applicants must create a new application account.
- \_\_\_\_\_ 4. Have an address in the state of Florida.
- \_\_\_\_\_ 5. Submit the documentation to request Florida Residency for tuition purposes.
- \_\_\_\_\_ 6. Have a minimum overall college GPA of 2.5 with minimum grades of C in the prerequisite coursework.
- \_\_\_\_\_ 7. Submit official transcripts from all prior colleges and universities with one denoting completion of an Associate degree in Respiratory Care or Cardiovascular Technology or Cardiopulmonary Technology from a regionally accredited institution.
- \_\_\_\_\_ 8. Have a minimum of 70 accepted credits **including** the following General Education prerequisite coursework:
- |                       |  |           |
|-----------------------|--|-----------|
| • ENC 1101            | Freshman Composition <sup>+</sup>              | 3 credits |
| • Mathematics         | See General Education Requirement <sup>+</sup> | 3 credits |
| • BSC 2093C <b>or</b> |  |           |
| • BSC X085C           | Anatomy & Physiology I <sup>+</sup>            | 4 credits |
| • BSC 2094C <b>or</b> |  |           |
| • BSC X086C           | Anatomy & Physiology II <sup>+</sup>           | 4 credits |
| • MCB 2010C           | Microbiology <sup>+</sup>                      | 4 credits |
- + This course must be completed with a minimum grade of C.
- \_\_\_\_\_ 9. Receive notification from the Valencia Admissions Office of *admission as a candidate* for the B.S. in Cardiopulmonary Sciences.
- \_\_\_\_\_ 10. After receiving notification of college admission as a *candidate* for the Bachelor of Science, send an Atlas email containing your VID and a clear, legible copy of your active Registered Respiratory Therapist (RRT) credential from the National Board for Respiratory Care **or** one of the following active credentials from the Cardiovascular Credentialing International: Registered Cardiovascular Invasive Specialist (RCIS), Registered Cardiac Electrophysiology Specialist

(RCES), Registered Congenital Sonographer (RCS), Registered Congenital Cardiac Sonographer (RCCS) or Registered Vascular Sonographer (RVS) to [AlliedHealthBS.ATC@valenciacollege.edu](mailto:AlliedHealthBS.ATC@valenciacollege.edu) . **Your professional credential must remain current throughout your program enrollment.**

Following program acceptance and registration notification from the School of Allied Health, if you have not done so, complete the fully online B.S. Degree Orientation through your Atlas account. If assistance is needed relative to course selection, registration and/or getting started in the program, confer with the School of Allied Health Bachelor-Level Advisor.

- \_\_\_\_ 10. Prior to beginning the Clinical Practice for the Non-Invasive Cardiology Concentration, the following documentation must be provided and the estimated cost is \$190 plus the cost for any needed immunizations and/or CPR:
- Current criminal background check and fingerprinting
  - Drug screening
  - Physical exam form
  - Record with up-to-date immunization data
  - Current specific CPR certification

## **COST**

The estimated total cost for the B.S. in Cardiopulmonary Sciences degree, including Florida Resident tuition for the 58 credits of program requirements, special course fees, and associated expenses such as the background check, CPR and immunizations (if needed) is approximately \$7400. This estimate does not include books.

## **ADDITIONAL PATHWAYS TO THE B.S. IN CARDIOPULMONARY SCIENCES**

**If you do not hold an associate degree or professional certification** in Respiratory Care or Cardiovascular Technology or Cardiopulmonary Technology from a regionally accredited institution, Valencia offers Associate in Science degrees in Respiratory Care and in Cardiovascular Technology. The Program Guides for these programs are available via [valenciacollege.edu/west/health](http://valenciacollege.edu/west/health).

**If you hold the RCIS, RCES, RCS, RCCS, or RVS credential from the Cardiovascular Credentialing International (CCI)** but do not hold an associate degree in Cardiovascular Technology, you may be eligible to earn Valencia's

A.S. Degree in Cardiovascular Technology via the Award of Credit process. If so, you would complete specific courses at Valencia and then, based on your professional credential, you would be granted college credit for the required Cardiovascular Technology courses and be awarded the A.S. Degree in Cardiovascular Technology. The college's Award of Credit eligible programs can be found on the webpage <https://valenciacollege.edu/academics/programs/as-degree/credit-industry-certification-agreements.php>

**If you hold the RRT credential from the National Board for Respiratory Care (NBRC)** but do not hold an associate degree in Respiratory Care, you may be eligible to earn Valencia's A.S. Degree in Respiratory Care via the Award of Credit process. If so, you would complete specific courses at Valencia and then, based on your professional credential, you would be granted college credit for the required Respiratory Care courses and be awarded the A.S. degree in Respiratory Care. For more information on this program, please access the webpage <https://valenciacollege.edu/academics/programs/health-sciences/respiratory-care/>

## **DEGREE CONCENTRATIONS**

When you apply to the BSCARDIO, you will need to declare one of the three degree concentrations: Community Health; Leadership; or Non-Invasive Cardiology. As reflected in the program curriculum that follows, 10 of your degree credits will be determined by the concentration you declare.

### **Community Health**

This concentration will prepare you to provide health education to help people within the community manage acute and chronic cardiopulmonary illness. You will gain an understanding of clinical approaches for prevention and treatment of chronic illness, as well as an overview of the public health system. You will apply this knowledge to work within acute care facilities, long-term care, outpatient centers, and homecare environments. Requirements for the Community Health Concentration Service Learning course will vary with the community health agency.

### **Leadership**

The concentration provides specialized course work for those aspiring to, or already in, leadership positions within their respective health professions. You will gain knowledge and skills related to

healthcare administrative and supervisory duties which will enable you to more effectively perform leadership roles within healthcare.

## **Non-Invasive Cardiology**

From diagnosis to treatment, you will focus on managing cardiovascular disease from the patient perspective. You will learn basic techniques of non-invasive ultrasound modalities used to evaluate disorders of cardiac circulation, cardiac valves and myocardium, pre- and post-procedure care and therapeutic measures to treat cardiovascular diseases. You will develop echocardiographic examination skills in the laboratory and clinical setting.

## **CONTINUING EDUCATION (CEUs)**

Courses completed in the BSCARDIO Program may be reported for Continuing Education (CEUs), based on the guidelines of your credentialing or licensing body. Based on the State Board of Respiratory Care guidelines, a 3-credit college course in the Cardiopulmonary Sciences is equivalent to 45 CEUs. Cardiovascular Credentialing International (CCI) accepts CEUs from approved providers and Valencia College is an approved continuing education provider. CCI should be consulted with any questions relating to CEUs for CVTs completing the BSCARDIO degree.

## **AWARD OF CREDIT OPTIONS**

You may be able to **earn credits toward the BSCARDIO degree via the Award of Credit process.** If you hold a specific advanced **professional credential(s) beyond the primary level with CCI or NBRC** and want to **receive course credit** for this credential(s), you will be able to request this credit after you complete 18 upper-division degree credits. To learn more about the Award of Credit options, visit [http://valenciacollege.edu/asdegrees/credit\\_alternative.cfm](http://valenciacollege.edu/asdegrees/credit_alternative.cfm) and scroll to Cardiopulmonary Sciences. **You should check with the program advisor to be sure you will still have 32 Valencia degree credits if you request this Award of Credit.**

**Degree Requirements**  
**B.S. in Cardiopulmonary Sciences**  
**2020-2021**

**VALENCIA B.S. GENERAL EDUCATION EXIT REQUIREMENTS** Credits

ENC 1102	Freshman Composition II <sup>+</sup>	3
SPC 1608	Fundamentals of Speech <b>OR</b>	
SPC 1017	Interpersonal Communication	3
Gen Ed Course	Any General Education course not being used as a requirement	3
Humanities	An Institutional Gordon Rule General Education Course <sup>+</sup>	3
Mathematics	A General Education Gordon Rule Course <sup>+</sup>	3
Social Science	An Institutional Gordon Rule General Education Course <sup>+</sup>	3

Plus, a Humanities General Education Core course and a Social Science General Education Core course if not completed prior to admission to the BSCARDIO. Choices for General Education courses are found at <http://catalog.valenciacollege.edu/degrees/bachelorofscience/generaleducation/>.

Foreign Language Proficiency Requirement (Options follow)	8
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**CORE COURSES** (30 Credits)

RET 3287	Cardiopulmonary Diagnostics I <sup>+</sup>	3
RET 3536	Cardiopulmonary Rehabilitation	3
RET 3715	Neonatal Medicine	3
RET 3354	Medical Pharmacology	3
HSC 4555	Pathophysiologic Mechanisms	3
HSC 4640	Health Law and Compliance	3
HSC 4652	Ethics and Health Care in a Pluralistic Society	3
HSA 4184	Leadership in Health Care	3
HSA 3702	Research Methods and Information Literacy	3
	Cardiopulmonary Sciences Elective (Choose one below)	3

RTE 3253 Teaching in the Health Professions<sup>+</sup>  
 HSA 4340 Principles of Human Resources Management<sup>+</sup>  
 RTE 3205 Administration and Supervision<sup>+</sup>

**SELECT ONE CONCENTRATION** (10 Credits)

**Concentration: Community Health**

RET 4524	Community Health <sup>+</sup>	3
HSC 4500	Epidemiology <sup>+</sup>	3
RET 4034	Problems in Patient Management <sup>+</sup>	3
RET 4940	Community Health Service Learning <sup>+</sup>	1

**Concentration: Leadership**

HSA 4110	Organizational Behavior <sup>+</sup>	3
HSA 4340	Principles of Human Resources Management <sup>+</sup>	3
HSA 4341	Conflict Management in Healthcare <sup>+</sup>	3
HSA 4850	Healthcare Leadership Capstone <sup>+</sup>	1

**Concentration: Non-Invasive Cardiology**

RET 4440C	Cardiac Ultrasound I <sup>+</sup> *	3
RET 4942L	Cardiac Ultrasound Clinical Practice I <sup>+</sup> *	2
	Non-Invasive Cardiology Electives <sup>+</sup> *	5

**Non-Invasive Cardiology Electives**

RET 4441C	Cardiac Ultrasound II <sup>+</sup> *	3
RET 4943L	Cardiac Ultrasound Clinical Practice II <sup>+</sup> *	2
RET 4443	Cardiac Ultrasound Physics <sup>+</sup> *	2
RET 4444C	Cardiac Ultrasound III <sup>+</sup> *	3
RET 4944L	Cardiac Ultrasound Clinical Practice III <sup>+</sup> *	3

Students must complete RET 4441C and RET 4943L to satisfy the Electives Requirement for the Non-Invasive Cardiology Concentration.

+ This course must be completed with a grade of C or better.

\* This course has a prerequisite or co-requisite; check description in Valencia Catalog.

## **CLINICAL PRACTICUM**

**A clinical practicum must be begun within 1 year of completion of the course prerequisite(s) in order to assure current content knowledge needed for safe clinical practice.**

## **FOREIGN LANGUAGE PROFICIENCY REQUIREMENT**

Two years of one foreign language or American Sign Language in high school; or English as a Second Language courses in college plus certain English communication courses in college; or one year of foreign language in college; or equivalent proficiency prior to graduation.

## **GRADUATION REQUIREMENTS**

- Earn a minimum 2.0 Valencia GPA and minimum overall 2.0 GPA.
- Earn a minimum grade of C (2.0) in all prerequisite and upper division courses.
- Satisfy Valencia's General Education requirements and Gordon Rule requirements unless you hold an Associate in Arts or Bachelor's degree or have completed the entire General Education program at a regionally accredited institution.
- Satisfy the State of Florida's Civic Literacy Competency.
- Complete at least 40 semester credits of upper division course work.
- Complete at Valencia at least 25% of the 128 hours degree program (32 credits), based upon the Florida College System's requirement of a 2+2 admission into the baccalaureate program.
- Obtain a degree audit through your Atlas account and review it for readiness to submit your application for graduation.
- Submit an application for graduation online through Atlas by the deadline date listed in the Academic Calendar in the online official catalog. You must have at least the minimum number of college-level credits for your degree, including all courses for which you are registered, in order to submit a graduation application.
- Fulfill all financial obligations to Valencia.  
Complete two years of one foreign language or American Sign Language in high school or one year of foreign language in college (or equivalent proficiency prior to graduation).
- Total Semester Credits Required for the degree: 128

### **Notes:**

Specialized courses may not be offered every session.

Prior to beginning the practicum/clinical, students must provide the following documentation:

Current criminal background check and fingerprinting

Drug screening

Physical exam form

Record with up-to-date immunization data

Current specific CPR certification

**Transfer Notes:**

- Students who hold an A.A. or bachelor's degree from a regionally accredited institution have satisfied Valencia's general education program requirements.
- Students transferring from a regionally accredited Florida public institution with the general education program (GEP) requirements of that institution met have thereby satisfied Valencia GEP requirements.
- 1000 and 2000 level courses do not substitute for upper division 3000 – 4000 level courses.

**Registration Note:**

- Once a student has been approved as “Course Registration Eligible,” it is the student’s responsibility to secure enrollment in the desired course(s).

**State of Florida’s Civic Literacy Competency:**

**6A-10.02413 Civic Literacy Competency.**

Prior to the award of an associate in arts or baccalaureate degree, first-time-in-college students entering a Florida College System institution in the 2018-19 school year, and thereafter must demonstrate competency in civic literacy through one of the following options prior to graduation:

- (1) Successfully passing either POSX041 American Government or AMHX020 Introductory Survey Since 1877.
- (2) Achieving the standard score on one of the following assessments:

Assessment	Standard Score
AP Government and Politics: United States	3
AP United States History	4
CLEP: American Government	50

*Rulemaking Authority 1001.02(1), 1007.25(4) FS. Law Implemented 1007.25 FS. History–New 6-19-18*

**SCHOOL OF ALLIED HEALTH PROGRAM GUIDELINES**  
**FOR THE B.S. in CARDIOPULMONARY SCIENCES (BSCARDIO)**  
**AND**  
**THE ADVANCED TECHNICAL CERTIFICATE in ECHOCARDIOGRAPHY**

Valencia's Health Sciences programs are offered through the School of Allied Health and the School of Nursing, which provide information about specific admission criteria for the programs. The Allied Health Program Guides, of which this is one, are developed for a specific academic year (August to July) and, as a rule, changes to admission and program requirements become effective at the start of an academic year; however, **Valencia College reserves the right to make changes in admission and program requirements as circumstances require.** If a mid-year change becomes necessary, it will be indicated via [valenciacollege.edu/west/health/admissionupdates.cfm](http://valenciacollege.edu/west/health/admissionupdates.cfm).

You may apply to only one bachelor's-level Allied Health program at a time and enrollment is limited to only one Allied Health program in a term.

**ATLAS EMAIL**

All communication from Valencia relative to program admission will be via your **Atlas email**. Written communication you send to Valencia staff should also be via your Atlas email and should include your name and your Valencia ID number.

**MANDATORY ORIENTATION**

Following acceptance to the B.S. in Cardiopulmonary Sciences, to register, you must have completed the online Bachelor's Orientation through your Atlas account. If you have not, there will be a hold on your record that will prevent registration until you complete the Bachelor's Orientation.

## **ONLINE PROGRAM/TESTING**

Except for the service learning course in the Community Health Concentration and some of the courses in the Non-Invasive Cardiology Concentration, the BSCARDIO is an online program. A very few of the courses may require on-site testing at a Valencia campus or at another proctored site if Valencia is not convenient for you. If you want to take your examinations in another proctored location, you will need to do so at an approved testing site such as a college or public library that offers proctoring services and which may require a fee.

## **BACKGROUND CHECK, FINGERPRINTING, DRUG TESTING, IMMUNIZATIONS AND CPR CERTIFICATION**

The Non-Invasive Cardiology Concentration in the BSCARDIO and the ATC in Echocardiography will require student clinical rotations in an external affiliate health care facility with which Valencia has an agreement for student clinical assignments. The affiliate's policies require that students serving in a clinical practice course be cleared of offenses that would disqualify them from participating in student clinical assignments. Thus, all students in a program or degree concentration that requires a clinical experience must submit to a criminal background check, fingerprinting and drug screening as well as provide documentation of specific immunizations and CPR certification prior to participation in the clinical experience.

If you have a positive background check, fingerprint or drug test, you may be denied continued enrollment in a Health Sciences program due to the inability to participate in a clinical practice assignment. If you have concerns regarding known background issues, it is recommended that you email questions to [hscompliance@valenciacollege.edu](mailto:hscompliance@valenciacollege.edu) .