

STATE BOARD OF COMMUNITY COLLEGES
CURRICULUM PROGRAM APPLICATION
(New to the System)

The State Board of Community Colleges is asked to approve the curriculum program at the listed college on the condition that equipment funds are available to the college and operating funds generated by the budget formula will permit the offering of the program without any special allocation of funds.

Pitt Community College
Breast Sonography (Certificate) (C45xxx)

Contact Person:

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**PROGRAM APPLICATION
SUMMARY EVALUATION REPORT
Pitt Community College
Breast Sonography (Certificate) (C45xxx)**

I. Program Planning

Pitt Community College is seeking approval for the Breast Sonography (Certificate) (C45xxx) program to begin Spring 2016. The planning area is defined as the college's service area of Pitt County. All colleges were notified of the planning process for this program.

The proposed program was approved by the Board of Trustees at Pitt Community College on March 24, 2015. Minutes from this Board meeting were attached to the program application. The President and the Board of Trustees of Pitt Community College have certified the following:

- The proposed program will enhance the workforce of North Carolina, will provide educational and training opportunities consistent with the mission of the college, and will not duplicate the opportunities currently offered.
- They have assessed the need for the proposed program and the resources required to maintain a viable program and certify that the college can operate the proposed program efficiently and effectively within the resources available to the college.
- The college will complete a program accountability report including student success measures, enrollment trends, completion rates, and employment data three years after implementation of the program.

II. Program Rationale

Pitt Community College (PCC) indicates the following:

- PCC's advisory committee for their Mammography program requested the development of this program. Both mammography and breast sonography will provide registered radiographers a career pathway or sequence of credentials they can build upon that will boost their job qualifications, providing them competitive advantage and increased marketability in the health care industry.
- Currently, PCC offers Medical Sonography (A45440) and Cardiovascular Sonography (A45160). Therefore, PCC has the resources (personnel, facilities, clinical placements, etc.) available to implement the proposed Breast Sonography (Certificate) program.
- It is reported in the U.S. Breast Cancer Statistics that *Breast cancer is the most common type of cancer among women in the United States. In 2014, almost 300,000 new cases of invasive and non-invasive breast cancer were expected to be diagnosed in women. Approximately, 2,360 new cases of invasive breast cancer were expected to be diagnosed in men. Although, mortality rates for breast cancer have declined since 1989, an estimated 40,000 women were expected to die in 2014 from the disease.*
- It is documented in the NC Central Cancer Registry that *the rate of breast cancer incidence in Pitt County is 171 per 100,000 people; the 8th highest incidence rate among all NC counties.*

- “Breast sonography, also known as breast ultrasound, is not routinely used for breast cancer screening or considered a replacement for mammograms. However, it is used to evaluate breast problems that are found during diagnostic mammograms, other screening measures, or physical exam. Advantages of breast sonography is its non-invasive, well-tolerated by patients, cost less than other imaging options such as MRI, and plays an important role in breast imaging as an adjunct to conventional mammography, particularly for women with dense breasts.” (*American Cancer Society, 2014 Breast Ultrasound*)
- In 2015, the Society of Breast Imaging noted *One major disadvantage of breast sonography is the examinations are operator dependent and the skills among those currently performing breast sonography is variable. There is a shortage of qualified personnel, both sonographers and radiologists, who can perform breast sonography with the necessary expertise.*
- The American Registry of Radiologic Technologists (ARRT) presently offers a registry credential for those demonstrating proficiency in breast sonography.
- As of March 2, 2015, the ARRT reports there are a total of 1,657 registered mammographers and 18 registered breast sonographers in North Carolina.
- National employment data does not disaggregate breast sonography from other types of sonographic exams. The U.S. Bureau of Labor Statistics includes breast sonography among the diagnostic medical sonography specialists and projects the number of jobs to grow by 39% from 2012-2022. In 2012, median annual pay was \$65,860.
- There are three employers in Pitt County that perform breast imaging procedures. All three employers when surveyed indicated a need for the program but they were unable to project the number of positions they would have open. A total of 18 registered mammographers are employed by these facilities. Currently, two of the employers rely on radiologists and the third relies on general internal medicine staff to perform the breast sonography procedures.
- Letters of support for the program were submitted to PCC by Carolina Breast Imaging Specialists, Nash Health Care Systems, Wilson Medical Center, Halifax Regional, Physicians East, and Eastern Radiologists.
- PCC assessed student interest by surveying graduates of their Mammography Program. Seventeen out of 31 graduates responded to the survey. All seventeen expressed interest in the program.
- PCC plans to offer the Breast Sonography (Certificate) program totally online with the exception of scanning labs and clinical rotations. Scanning labs will be facilitated on campus and clinical rotations will be completed in breast imaging centers.

III. Impact of the Proposed Program on Other Programs

This program would be new to the community college system. Eight colleges are currently approved to offer the Medical Sonography (A45440) program, including Pitt Community College. Six colleges are currently approved to offer the Cardiovascular Sonography (A45160) program, including Pitt Community College. An impact assessment was sent to the colleges currently approved to offer the Medical Sonography (A45440) and Cardiovascular Sonography (A45160) programs. No negative impact responses were received.

IV. Implementation of Collaborative Plan

Not Applicable

V. Curriculum Design

The proposed program of study is in compliance with the proposed curriculum standard.


Coordinator: Ms. Renee Batts

Institutional Certification

This curriculum program Breast Sonography (Certificate) (C45XXX) will enhance the workforce of North Carolina, will provide educational and training opportunities consistent with the mission of the college, and will not duplicate the opportunities currently offered.

Pitt Community College has assessed the need for this program and the resources required to maintain a viable program and certifies that the college can operate this program efficiently and effectively within the resources available to the college.

The college understands that this proposed program will require a program accountability report that will include items such as student success measures, enrollment trends, completion rates, and employment data three years after implementation if the program is approved by the State Board.



Signature, President of College

3/24/15

Date



Signature, Board of Trustees Chair

3/24/15

Date

PROPOSED**CURRICULUM STANDARD**

Effective Term Spring 2016 [2016*01]
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Curriculum Program Title	Breast Sonography (Certificate)	Program Code	C45xxx
Concentration	(not applicable)	CIP Code	51.0919

Curriculum Description

The Breast Sonography curriculum provides registered mammographers the didactic and clinical experience necessary to become registered breast sonographers.

Course work includes breast pathophysiology; physics, instrumentation, and equipment operation necessary to perform diagnostic and interventional breast sonography procedures; and clinical breast image production and evaluation.

Graduates may be eligible to apply to take the American Registry of Radiologic Technologists (ARRT) certification exam in Breast Sonography.

Individuals entering this curriculum must be a registered Radiologic Technologist and a registered Mammographer.

Curriculum Requirements*

[for associate degree, diploma, and certificate programs in accordance with ID SBCCC 400.97 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work-based learning may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit in Program	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Proposed

Major Hours

[ref. 1D SBCCC 400.97 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration (if applicable).** A concentration of study must include a minimum of 12 semester hours of credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work-based learning may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

Breast Sonography (Certificate) (C45xxx)

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE			16 SHC
Required Courses: BST 101 Breast Pathophysiology 1 SHC BST 102 BST Physics & Equipment 2 SHC BST 103 BST Image Production & Eval 2 SHC BST 104 BST Procedures 1 SHC BST 105 BST Clinical Education 10 SHC			
B. CONCENTRATION (if applicable)			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> BST <i>Up to three semester hour credits may be selected from the following prefixes: ARA, ASL, CHI, FRE, GER, ITA, JPN, LAT, POR, RUS and SPA.</i>			

Approved by the State Board of Community Colleges on _____...

Breast Sonography Courses

BST 101 Breast Pathophysiology

Class: 1 Lab: 0 Clinical: 0 Credit: 1

Prerequisites: None

Corequisites: None

This course provides a comprehensive study of pathophysiology of the breast. Topics include anatomy, pathophysiology, surgical/treatment changes, benign and malignant pathology, related to breast sonographic images in correlation to mammographic images. Upon completion, students should be able to demonstrate a detailed knowledge of breast pathophysiology.

BST 102 BST Physics & Equipment

Class: 2 Lab: 0 Clinical: 0 Credit: 2

Prerequisites: None

Corequisites: None

This course provides a comprehensive study of physics and equipment for breast sonography. Topics include the principles of breast sonography physics, equipment and system components including accessories, image display and storage, and maintenance for breast sonography equipment. Upon completion, students should be able to demonstrate a detailed knowledge of the physics and equipment used in breast sonography.

BST 103 BST Image Production & Eval

Class: 1 Lab: 3 Clinical: 0 Credit: 2

Prerequisites: None

Corequisites: None

This course provides the fundamentals of breast sonography image production, patient care, and image analysis. Topics include patient communication, breast education and assessment, image production, and evaluation and selection of representative images. Upon completion, students should be able to produce and analyze breast sonography images.

BST 104 BST Procedures

Class: 1 Lab: 0 Clinical: 0 Credit: 1

Prerequisites: None

Corequisites: None

This course provides the fundamentals of interventional breast sonography procedures. Topics include positioning, patient care, informed consent and time out procedures, selection and preparation of equipment, infection control, and post-procedure care. Upon completion, students should be able to perform interventional breast sonography procedures.

BST 105 Clinical Education

Class: 0 Lab: 0 Clinical: 30 Credit: 10

Prerequisites: None

Corequisites: None

This course provides the opportunity to apply knowledge gained from classroom instruction to the breast sonography clinical setting. Emphasis is placed on breast sonography procedures, interventional examinations, image production and evaluation in correlation with mammographic procedures and equipment operation. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

BST 106 BST Clinical Ed Supplement

Class: 0 Lab: 0 Clinical: 6 Credit: 2

Prerequisites: None

Corequisites: None

This course provides the opportunity to enhance knowledge of breast sonography procedures, interventional examinations, image production and evaluation. Emphasis is placed on strengthening acquired clinical skills. Upon completion, students should be able to demonstrate mastery of breast sonography in the role of the entry level breast sonographer.

BST 107 BST Capstone

Class: 2 Lab: 0 Clinical: 0 Credit: 2

Prerequisites: None

Corequisites: None

This course provides an overview of breast sonography topics as practiced in the didactic and clinical settings. Emphasis is placed on critical thinking and integration of didactic and clinical components. Upon completion, students should be able to demonstrate the comprehensive knowledge required to be an entry-level breast sonographer.

STATE BOARD OF COMMUNITY COLLEGES
NEW CURRICULUM PREFIX
TIERED FUNDING FORMULA RECOMMENDATIONS

The State Board of Community Colleges is asked to assign the following new curriculum prefix to the North Carolina Community College System Tiered Funding Formula:

Tier 1A

BST – Breast Sonography

Rationale: The BST curriculum prefix is in the area of health care. *Individuals enrolled in BST courses must be a registered radiologic technologist and a registered mammographer.* The SON curriculum course prefix for Medical Sonography and MAM curriculum course prefix for Mammography are both Tier 1A classification.

Background:

On August 15, 2014, the State Board of Community Colleges adopted the 2014-2015 State Aid Allocations and Budget Policies, which included the implementation of a four-tiered funding model. To implement the Tiered Funding Forming Model, all existing curriculum and continuing education course prefixes were assigned to one of four funding levels as defined below:

Tier 1A: Includes curriculum budget FTE in health care and technical education courses that train North Carolinians for immediate employment in priority occupations that have documented skills gaps and pay higher wages. This tier also includes FTE in a limited number of continuing education courses that train students for the exact same third-party certification as curriculum courses in Tier 1A.

Tier 1B: Includes curriculum budget FTE in other high cost areas of health care, technical education, lab-based science, and college-level math courses. With the implementation of Closing the Skills Gap, Tier 1B also includes FTE in short-term, workforce continuing education courses that help prepare students for jobs in priority occupations and lead to competency-based industry credentials.

Tier 2: Includes

- a) all other curriculum budget FTE,
- b) all Basic Skills budget FTE, and
- c) budget FTE associated with other continuing education courses that are scheduled for 96 hours or more and are mapped to a third-party credential, certification, or industry-designed curriculum.

Tier 3: Includes all other continuing education budget FTE.

This weighted allocation model is designed to provide a funding differential between each tier. Tier 1A is funded at a level equal to 30% higher than Tier 2, while Tier 1B is funded at a level that is 15% higher than Tier 2. Tier 3 is funded at a rate that is 15% less than Tier 2.

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