



NORTH CAROLINA COMMUNITY COLLEGE SYSTEM

R. Scott Ralls, Ph.D.

President

August 27, 2015

MEMORANDUM

TO: Presidents
Chief Academic Officers

FROM: Wesley E. Beddard, Associate Vice President
Programs

SUBJECT: State Board Action on August 21, 2015
New and Revised Curriculum Standards

On August 21, 2015, the State Board of Community Colleges approved curriculum courses and a curriculum standard for the following new program:

Breast Sonography (Certificate) (C45490)

A Tier IA classification was approved for the new BST curriculum course prefix.

In additional action, the State Board of Community Colleges approved the requested revision to the following curriculum standard:

Business Analytics (A25350)

Please be aware that you must implement the revised curriculum standard no later than one year after the effective term. You must update your college's electronic programs of study and receive approval from the System Office prior to implementation of the revised program.

An outline of the specific curriculum standard revisions, revised curriculum standard, new courses, and new curriculum standard are attached for your convenience. You may view all curriculum standards and courses by visiting the Academic Programs website at:

<http://www.nccommunitycolleges.edu/academic-programs>

If you have any questions concerning the August State Board action items listed above, please contact Ms. Jennifer Frazelle at 919.807.7120 or frazellej@nccommunitycolleges.edu.

WB/JF/gr

Attachments

c: Dr. Lisa M. Chapman
Ms. Jennifer Frazelle

Ms. Elizabeth Self
Program Coordinators

CC15-026
Email

**Outline of Curriculum Standard Revisions
State Board of Community Colleges – August 21, 2015**

Business Analytics (A25350)

Revisions:

- Added the following courses to the “Required Courses” area:
BAS 221 Intro to Predictive Analytics
BAS 240 Data Structures for Analytics
- Removed the following courses from the “Required Courses” area:
CTS 130 Spreadsheet
DBA 110 Database Concepts
- Removed the “Data Management” subject area.

**Please note, the revisions result in a decrease of required core hours for the AAS degree from 32-34 SHC to 29-31 SHC.*

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.

CURRICULUM STANDARD

Effective Term
Spring 2016
[2016*01]

Curriculum Program Title	Breast Sonography (Certificate)	Program Code	C45490
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 1D 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.*

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) (C45490)

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE 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			16 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>			

CURRICULUM STANDARD

Effective Term
Fall 2016
[2016*03]

Curriculum Program Title	Business Analytics	Program Code	A25350
Concentration	(not applicable)	CIP Code	52.1301

Curriculum Description

The Business Analytics curriculum is designed to provide students with the knowledge and the skills necessary for employment and growth in analytical professions. Business analysts process and analyze essential information about business operations and also assimilate data for forecasting purposes.

Students will complete course work in business analytics, including general theory, best practices, data mining, data warehousing, predictive modeling, project and operations management, statistical analysis, and software packages. Related skills include business communication, critical thinking and decision making.

Graduates should qualify for employment as data technicians, data scientists, business and data analytics engineers, and business analysts in the fields of finance, banking, logistics, marketing, healthcare, manufacturing, information technology, and government organizations.

Curriculum Requirements*

[for associate degree, diploma, and certificate programs in accordance with 1D 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.*

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.

Business Analytics (A25350)

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE <i>Courses required for the diploma are designated with *</i> Required Courses: * BAS 120 Intro to Analytics 3 SHC * BAS 121 Data Visualization 3 SHC * BAS 150 Intro to Analytical Program. 3 SHC * BAS 220 Appl. Analytical Program. 3 SHC BAS 221 Intro to Predictive Analytics 3 SHC BAS 240 Data Structures for Analytics 3 SHC BAS 270 Adv Analytical Tools & Methods 3 SHC BUS 110 Introduction to Business 3 SHC Required Subject Areas: Basic Computer Skills (Select one): CIS 110 Introduction to Computers 3 SHC CIS 111 Basic PC Literacy 2 SHC OST 137 Office Software Applicat. 3 SHC *Statistics (Select one) BUS 228 Business Statistics 3 SHC MAT 152 Statistical Methods I 4 SHC	29-31 SHC	15 SHC	
B. CONCENTRATION (<i>if applicable</i>)			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> ACC, AIB, BAF, BAS, BUS, CIS, CJC, CSC, CTI, CTS, DBA, ECM, ECO, ETR, GIS, HBI, HRM, INS, INT, ISC, ITN, LOG, MAT, MKT, OMT, OST, PAD, RLS, WBL, and WEB <i>Up to two semester hour credits may be selected from ACA.</i> <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>			