NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
R. Scott Ralls, Ph.D.
President

June 11, 2015

MEMORANDUM

To: Presidents
Chief Academic Officers

From: Wesley Beddard, Associate Vice President
Programs

Subject: Curriculum Review Committee Course Approvals

The Curriculum Review Committee (CRC) has the responsibility for maintaining the curriculum courses in the *Combined Course Library* (CCL). The approved course requests from the Summer 2015 CRC meeting, held on May 27, 2015, are attached for your information. *Course revisions may involve the removal of required prerequisites or corequisites. Please note that colleges may add local prerequisites and/or corequisites if they determine a need exists.*

Course Revision Impact to Curriculum Standards
The CRC approved requests to revise the **course description, prerequisite(s), corequisite(s), and/or class/lab hours** of core courses found on the curriculum standards listed below. Please note that the only change indicated on the printed standard will be the inclusion of the statement *"CRC Revised-Electronic Only 5/27/15"*, since only the electronic version of the standard in Colleague will be revised.

Esthetics Technology (Certificate) (C55230)
Manicuring/Nail Technology (Certificate) (C55400)

The State Board of Community Colleges has delegated authority to the Senior Vice President to approve curriculum standard changes involving **core course title and/or credit hour changes** resulting from CRC action. The standards listed below have been revised as a result CRC approved changes to one or more core courses.

Business Analytics (A25350)
Electric Utility Substation and Relay Technology (A50510)

CC15-017
Email

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Information Technology Alignment Project (ITAP)
In addition to traditional course requests, the CRC approved course requests that were submitted as part of the Information Technology Alignment Project (ITAP). These courses are reflected on a separate log. A list of curriculum standards that were revised, based on CRC action, is also included on the ITAP log.

The following curriculum standard revision, proposed by the ITAP participants, will be taken to the upcoming State Board meeting(s) for additional action:

Information Technology (A25700)

In addition, a request to archive the following curriculum standards will be taken to the State Board for action. These have been proposed for incorporation into the Information Technology curriculum standard. *(With the exception of High Performance Computing, which is no longer offered.)*

Computer Information Technology (A25260)
Computer Programming (A25130)
Computer Technology Integration (A25500)
Database Management (A25150)
High Performance Computing (A25230)
Information Systems Security (A25270)
Information Systems Security/Security Hardware (A2527B)
Networking Technology (A25340)
Web Technologies (A25290)

Criteria for Direct Placement into MAT 271 Calculus I
The CRC approved the following criteria for direct placement into *MAT 271 Calculus I.*

A student may place directly into MAT 271 if the student has met at least one (1) of the following criteria within the past five (5) years:

- A score of 2 or higher on the AP Calculus AB Exam.
- A grade of C or higher in an AP Calculus course and an unweighted HS GPA of 3.0 or higher.
- A score of 90 or higher on the ACCUPLACER College-Level Math (CLM) test.
- A score of 46 or higher on the trigonometry section of the ACT Compass Math Placement Test.
- A score of 580 or higher on the SAT Math and a grade of C or higher in the North Carolina Standard Course of Study Pre-Calculus course or an equivalent course from another state.
- A score of 27 or higher on the ACT Math and a grade of C or higher in the North Carolina Standard Course of Study Pre-Calculus course or an equivalent course from another state.
- A score of 560 or higher on the SAT Subject Test in Mathematics Level 2.

The policy will be evaluated in a few years to compare the completion rates of students placed into MAT 271 by the above criteria to those placed by successful completion of MAT 172.

Please be aware that you must implement the attached revised courses and standards no later than one year after the effective term. You must update your college's electronic program of study and receive approval from the System Office prior to implementation of the revised courses and programs. The standards that were revised based on traditional course request action are attached for your convenience.

Curriculum standards, curriculum courses and procedures for submitting requests to the CRC are available on the Academic Programs home page at http://www.nccommunitycolleges.edu/programs. If you need assistance or clarification, please contact Ms. Jennifer Frazelle, Director of Academic Programs at frazellej@nccommunitycolleges.edu or (919) 807-7120.

WB/dm

Attachments

c: Curriculum Review Committee
Dr. Lisa M. Chapman
Ms. Elizabeth Self
Ms. Jennifer Frazelle
Program Coordinators

Curriculum Course Requests Approved By the Curriculum Review Committee (CRC)
May 27, 2015

Course Prefix #	Title	Request	Effective Semester	Curriculum Standard Core Course
BAS 120	Business Analytics I	Change course description, Change course title from "Business Analytics I" to "Intro to Analytics", Change course hours from "3-0-0-3" to "2-3-0-3"	Fall 2015 (2015*03) Early Implementation	Business Analytics (A25350)
BAS 121	Analytics Methods I	Change course description, Change course title from "Analytics Method I" to "Data Visualization", Change course hours from "3-0-0-3" to "2-3-0-3", Change prerequisites from “None” to “BAS 120”.	Fall 2015 (2015*03) Early Implementation	Business Analytics (A25350)
BAS 150	Analytics Tools I	Change course description, Change course title from "Analytics Tools I" to "Intro to Analytical Program", Change course hours from "3-0-0-3" to "2-3-0-3", Change prerequisites from “BAS-121” to “None”,	Fall 2015 (2015*03) Early Implementation	Business Analytics (A25350)
BAS 220	Business Analytics II	Change course description, Change course title from "Business Analytics II" to "Appl. Analytical Program", Change course hours from "3-0-0-3" to "2-3-0-3", Change prerequisites from “BAS 120” to “BAS 150	Fall 2015 (2015*03) Early Implementation	Business Analytics (A25350)
BAS 221	Analytics Methods II	Change course description, Change course title from "Analytics Method II" to "Intro to Predictive Analytics" Change course hours from "3-0-0-3" to "2-3-0-3", Change prerequisites from “BAS 150” to “BAS 121 and BAS 220"	Fall 2015 (2015*03) Early Implementation	NA
BAS 230	Business Analytics III	Change course description, Change course title from "Business Analytics III" to "Applied Predictive Modeling", Change course hours from "3-0-0-3" to "2-3-0-3", Change prerequisites from “BAS 220” to “BAS 221”	Fall 2015 (2015*03) Early Implementation	NA
BAS 240	Data Structures for Analytics	New CCL course	Fall 2015 (2015*03)	NA
BAS 250	Analytics Tools II	Change course description, Change course title from "Analytics Tools II" to "Analytical Tools & Methods" Change course hours from "3-0-0-3" to "2-3-0-3", change prerequisites from “BAS 150” to “BAS 240”	Fall 2015 (2015*03) Early Implementation	NA
BAS 260	Times Series and Forecasting	New CCL course	Fall 2015 (2015*03)	NA
BAS 270	Analytics Practicum	Change course description, Change course title from "Analytics Practicum" to "Adv Analytical Tools & Methods" Change course hours from "3-0-0-3" to "2-3-0-3", Change prerequisites from “BAS 220” to “BAS 221 and BAS 240"	Fall 2015 (2015*03) Early Implementation	Business Analytics (A25350)

Curriculum Course Requests Approved By the Curriculum Review Committee (CRC)
May 27, 2015

Course Prefix #	Title	Request	Effective Semester	Curriculum Standard Core Course
COS 121	Manicure/Nail Technology I	Change course description	Fall 2015 (2015*03) Early Implementation	Manicuring/Nail Technology (Certificate)(C55400)
COS 126	Esthetics Salon II	Change course description	Fall 2015 (2015*03) Early Implementation	Esthetics Technology (Certificate)(C55230)
COS 222	Manicure/Nail Tech. II	Change course description	Fall 2015 (2015*03) Early Implementation	Manicuring/Nail Technology (Certificate)(C55400)
DES 285	Capstone/Interior Design	Change prerequisites from "DES 210, DES 230 and DES 240" to "DES 230 and DES 240", Change corequisite from "None" to "DES 210"	Summer 2016 (2016*02)	NA
EUS 130	Elect Util Print Reading	Change course hours from "1-2-0-2" to "3-2-0-4"	Fall 2015 (2015*03) Early Implementation	Electric Utility Substation and Relay Technology (A50510)
EUS 225	Elect Util Safety & Human Perf	New CCL course	Fall 2015 (2015*03)	NA
EUS 255	Elect Util Troubleshooting	New CCL course	Fall 2015 (2015*03)	NA
EUS 260	Cap & Case Studies in EUSRT	Change course hours from "2-0-0-2" to "0-4-0-2"	Fall 2015 (2015*03) Early Implementation	Electric Utility Substation and Relay Technology (A50510)
HOR 161	Plants Materials II	Change prerequiste from "HOR 160" to "None"	Fall 2015 (2015*03) Early Implementation	NA
HOR 253	Horticulture Turfgrass	Change prerequiste from "HOR 162 or HOR 166" to "None"	Fall 2015 (2015*03) Early Implementation	NA

Curriculum Course Requests Approved By the Curriculum Review Committee (CRC)
May 27, 2015

Course Prefix #	Title	Request	Effective Semester	Curriculum Standard Core Course
MCO 266	ICS Cyber Security	New CCL course	Fall 2015 (2015*03)	NA
MUS 260	Intro to Music Education	New CCL course	Fall 2015 (2015*03)	NA. MUS 260 will be forwarded to Transfer Advisory Committee with a request to add to the CAA transfer course list.
SGD 180	SGD HTML Programming I	New CCL course (Wake TCC)	Fall 2015 (2015*03)	NA
SGD 280	SGD HTML Programming II	New CCL course	Fall 2015 (2015*03)	NA
UAS 110	Intro to UAS Operations	New CCL course	Fall 2015 (2015*03)	NA
UAS 111	Unmanned Aircraft Systems	New CCL course	Fall 2015 (2015*03)	NA
UAS 112	UAS Communications/Telemetry	New CCL course	Fall 2015 (2015*03)	NA
UAS 150	UAS Flight Simulation	New CCL course	Fall 2015 (2015*03)	NA
UAS 152	Remote UAS Sensing and Control	New CCL course	Fall 2015 (2015*03)	NA
UAS 230	UAS Aerial Photo Survey	New CCL course	Fall 2015 (2015*03)	NA

Information Technology Alignment Project
New, Revised, and Archived Courses
Approved by Curriculum Review Committee (5/27/15)
Effective Term: Fall 2016 (with exception as noted by *)

New Courses
Descriptions of the courses listed below are located at:
http://www.nccommunitycolleges.edu/academic-programs/combined-course-library.

Course #	Course Title
CTI-115	Computer Systems Foundation
SEC-180	Information Assurance Principles
SEC-285	Systems Security Project

Revised Courses
ITAP representatives recommended that state-level requisites be removed or modified for the courses listed below in order to allow colleges to tailor courses required in a pathway to local needs while ensuring appropriate student preparation, retention, and completion agendas. The request was approved by the Curriculum Review Committee with the clear understanding that local prerequisites should be added to the courses as necessary.

If a course is on the Comprehensive Articulation Agreement (CAA) transfer course list and the revision request is approved by the CRC, the course will then be presented for information to the Transfer Advisory Committee.

Course #	Current Course Title	Action	Core/ CAA	Action Description
CIS-110	Introduction to Computers	Revise	A25100 A25120 A25210 A25310 A25330 A25350 A25370 A2537A A2537B A25390 A25410 A25420 A25490 A25510 A25600 A25610 A40120 A40130 A40350 A50460 A50510 A55310 CAA list	Student Learning Outcomes added*

Course #	Current Course Title	Action	Core/ CAA	Action Description
CIS-115	Intro to Prog & Logic	Revise	A25210 A40110 A50460 CAA list	Student Learning Outcomes added Course description modified.
CIS-155	Database Theory/Analysis	Revise	N/A	State-level requisite removed
CIS-160	MM Resources Integration	Revise	N/A	State-level requisite removed
CIS-162	MM Presentation Software	Revise	N/A	State-level requisite removed
CSC-120	Computing Fundamentals I	Revise	N/A CAA list	Student Learning Outcomes added
CSC-249	Data Structure & Algorithms	Revise	N/A	State-level requisite removed
CSC-289	Programming Capstone Project	Revise	N/A	State-level prerequisite modified
CTI-110	Web, Pgm, & Db Foundation	Revise	N/A	Student Learning Outcomes added
CTI-120	Network & Sec Foundation	Revise	A25510	Student Learning Outcomes added*
CTI-130	Os and Device Foundation	Revise	A25510 A40160	Student Learning Outcomes added*
CTI-289	CTI Capstone Project	Revise	N/A	State-level prerequisite modified
CTS-115	Info Sys Business Concepts	Revise	A25510 CAA list	Student Learning Outcomes added*
CTS-120	Hardware/Software Support	Revise	A25510 A40160	Student Learning Outcomes added*
CTS-125	Presentation Graphics	Revise	N/A	State-level requisite removed
CTS-130	Spreadsheet	Revise	A25330 A25350	State-level requisite removed
CTS-135	Integrated Software Intro	Revise	N/A	State-level requisite removed
CTS-210	Computer Ethics	Revise	N/A	State-level requisite removed
CTS-240	Project Management	Revise	N/A	State-level requisite removed
CTS-245	Integrated Apps Expert	Revise	N/A	State-level requisite removed
CTS-250	User Support & Software Eval	Revise	N/A	State-level requisite removed
CTS-272	Desktop Support: Apps	Revise	N/A	State-level requisite removed
CTS-285	Systems Analysis & Design	Revise	N/A	State-level requisite removed
CTS-286	Network Support	Revise	N/A	State-level requisite removed
CTS-289	System Support Project	Revise	N/A	State-level prerequisite modified
DBA-112	Database Utilization	Revise	N/A	State-level requisite removed
DBA-270	Oracle Performance Tuning	Revise	N/A	State-level requisite removed
DBA-271	SQL Server Perf Tuning	Revise	N/A	State-level requisite removed
DBA-273	MySQL Performance Tuning	Revise	N/A	State-level requisite removed
DBA-285	Data Warehousing and Mining	Revise	N/A	State-level requisite removed
DBA-289	Database Project	Revise	N/A	State-level prerequisite modified
NET-111	Internetwk Arch & Design	Revise	N/A	State-level requisite removed
NET-126	Routing Basics	Revise	A40400	State-level requisite removed
NET-175	Wireless Technology	Revise	N/A	State-level requisite removed
NET-225	Routing & Switching I	Revise	N/A	State-level requisite removed
NET-226	Routing and Switching II	Revise	N/A	State-level requisite removed
NET-230	Wide Area Networking	Revise	N/A	State-level requisite removed

Course #	Current Course Title	Action	Core/ CAA	Action Description
NET-235	Netwking. Troubleshooting	Revise	N/A	State-level requisite removed
NET-240	Network Design	Revise	N/A	State-level requisite removed
NET-260	Internet Dev & Support	Revise	N/A	State-level requisite removed
NET-270	Building Scalable Networks	Revise	N/A	State-level requisite removed
NET-272	Multi-Layer Networks	Revise	N/A	State-level requisite removed
NET-273	Internetworking Support	Revise	N/A	State-level requisite removed
NET-289	Networking Project	Revise	N/A	State-level prerequisite modified; State-level corequisite removed
NOS-110	Operating Systems Concepts	Revise	A25510 A40160	Student Learning Outcomes added*
NOS-120	Linux/UNIX Single User	Revise	N/A	State-level requisite removed
NOS-130	Windows Single User	Revise	N/A	State-level requisite removed
SEC-150	Secure Communications	Revise	N/A	State-level requisite removed
SEC-160	Security Administration I	Revise	N/A	State-level requisite removed
SEC-210	Intrusion Detection	Revise	N/A	State-level requisite removed
WEB-125	Mobile Web Design	Revise	N/A	State-level requisite removed
WEB-180	Active Server Pages	Revise	N/A	State-level requisite removed
WEB-182	PHP Programming	Revise	N/A	State-level requisite removed
WEB-185	ColdFusion Programming	Revise	N/A	State-level requisite removed
WEB-186	XML Technology	Revise	N/A	State-level requisite removed
WEB-187	Prog for Mobile Devices	Revise	N/A	State-level requisite removed
WEB-225	Content Management Sys	Revise	N/A	State-level requisite removed
WEB-230	Implementing Web Serv	Revise	N/A	State-level requisite removed
WEB-240	Internet Security	Revise	N/A	State-level requisite removed
WEB-250	Database Driven Websites	Revise	N/A	State-level requisite removed
WEB-260	E-Commerce Infrastructure	Revise	N/A	State-level requisite removed
WEB-289	Internet Technologies Project	Revise	N/A	State-level prerequisite modified

** Student Learning Outcomes will be added to the **current** version of the course to avoid revision of curriculum standards and related programs of study where indicated with a "*".*

Archived Courses

The course archive request list was compiled based on data showing no enrollment in the courses since 2012. This list represents the final set of courses approved by the CRC for archiving.

Descriptions of the courses listed below are located at: http://www.nccommunitycolleges.edu/academic-programs/combined-course-library.

Course #	Current Course Title	Action Description	Core Course
CIS-103	Data Entry Operations	Archive Course	N/A
CIS-161	DTP Proofreading & Editing	Archive Course	N/A
CIS-166	Desktop Publishing II	Archive Course	N/A
CIS-168	Desktop Presentations	Archive Course	N/A
CIS-260	Business Graphics Apps	Archive Course	N/A
CIS-261	Programming for Multimedia	Archive Course	N/A
CIS-262	Adv Prog for Multimedia	Archive Course	N/A
CIS-264	MM Application Fundamentals	Archive Course	N/A
CIS-265	MM Database Design	Archive Course	N/A
CIS-266	Multimedia Design	Archive Course	N/A
CIS-267	Multimedia Applications	Archive Course	N/A
CIS-268	Multimedia Project	Archive Course	N/A
CIS-272	Dist Sys for Helpdesk	Archive Course	N/A
CIS-282	Network Technology	Archive Course	N/A
CSC-125	Intro to Parallel Programming	Archive Course	N/A
CSC-136	Fortran Programming	Archive Course	N/A
CSC-140	Visual C Programming	Archive Course	N/A
CSC-142	Visual COBOL Programming	Archive Course	N/A
CSC-144	AS/400 CL Programming	Archive Course	N/A
CSC-145	Visual C/C++ Programming	Archive Course	N/A
CSC-150	Visual RPG Programming	Archive Course	N/A
CSC-220	Machine Implem of Algor	Archive Course	N/A
CSC-225	Advanced Parallel Programming	Archive Course	N/A
CSC-229	MPI Programming	Archive Course	N/A
CSC-230	Analysis of Algorithms	Archive Course	N/A
CSC-233	Advanced C Programming	Archive Course	N/A
CSC-236	Advanced Fortran Programming	Archive Course	N/A
CSC-240	Advanced Visual C	Archive Course	N/A
CSC-242	Adv Visual COBOL Programming	Archive Course	N/A
CSC-244	CICS	Archive Course	N/A
CSC-246	Realtime Programming	Archive Course	N/A
CSC-247	Advanced Assembly Language	Archive Course	N/A
CSC-250	Advanced Visual RPG Programming	Archive Course	N/A
CSC-255	Open Mp Programming	Archive Course	N/A
CSC-275	HPC Algorithms	Archive Course	N/A
CSC-278	JAVA Message Service	Archive Course	N/A

Course #	Current Course Title	Action Description	Core Course
CTS-270	Essentials of System Perform	Archive Course	N/A
CTS-271	Desktop Support: OS	Archive Course	N/A
DBA-264	SAS DB MS Administration	Archive Course	N/A
DBA-274	SAS Performance Tuning	Archive Course	N/A
HPC-110	Intro to HPC	Archive Course	N/A
HPC-130	Intro to HPC Communication	Archive Course	N/A
HPC-140	Intro to HPC Architecture	Archive Course	N/A
HPC-150	HPC Networking Technology	Archive Course	N/A
HPC-152	HPC Development Tools	Archive Course	N/A
HPC-154	Intro to Bioinformatics Comp	Archive Course	N/A
HPC-162	HPC Security	Archive Course	N/A
HPC-170	Introduction to HPC Data Mining	Archive Course	N/A
HPC-172	HPC Applications	Archive Course	N/A
HPC-180	Intro to Cluster Comput	Archive Course	N/A
HPC-230	Adv HPC Communication	Archive Course	N/A
HPC-240	Adv HPC Architecture	Archive Course	N/A
HPC-245	Grid Technologies	Archive Course	N/A
HPC-262	Advanced HPC Security	Archive Course	N/A
HPC-264	HPC Security Management	Archive Course	N/A
HPC-270	Adv HPC Data Mining	Archive Course	N/A
HPC-272	Emerging HPC Technologies	Archive Course	N/A
HPC-280	Adv Cluster Computing	Archive Course	N/A
HPC-285	Sys Analysis and Design	Archive Course	N/A
ITN-230	Intranets	Archive Course	N/A
ITN-250	Implement Internet Serv.	Archive Course	N/A
ITN-270	Adv Internet Databases	Archive Course	N/A
ITN-280	UNIX Internet Prog	Archive Course	N/A
NET-116	Fund of Voice/Data Cable	Archive Course	N/A
NET-185	Asynch Transfer Mode Tech	Archive Course	N/A
NET-271	Remote Access Networks	Archive Course	N/A
NET-286	Current Trends in Security Sys	Archive Course	N/A
NOS-111	Operating System - DOS	Archive Course	N/A
NOS-149	Operating System - MVS (TM)	Archive Course	N/A
NOS-211	AS/400 Maint and Operation	Archive Course	N/A
NOS-240	Novell Admin I	Archive Course	N/A
OSS-120	Introduction to AIX	Archive Course	N/A
OSS-160	AIX Sys Administrat I	Archive Course	N/A
OSS-220	AIX Sys Administrat II	Archive Course	N/A
SEC-170	SOHO Security	Archive Course	N/A
SEC-220	Defense-In-Depth	Archive Course	N/A
SEC-230	Attack Methodology	Archive Course	N/A
SEC-240	Wireless Security	Archive Course	N/A
SEC-270	Secure Routing/Firewalls	Archive Course	N/A

Course #	Current Course Title	Action Description	Core Course
SEC-275	Advanced Firewalls	Archive Course	N/A
SEC-289	Security Capstone Project	Archive Course	N/A
WEB-119	Web Tech Prog Orient	Archive Course	N/A
WEB-183	Perl Programming	Archive Course	N/A

CURRICULUM STANDARD

*Effective Term Summer 1999 [1999*02]*

Curriculum Program Title	**Esthetics Technology (Certificate)**	Program Code	**C55230**
Concentration	**(not applicable)**	CIP Code	***12.0409***

Curriculum Description

The Esthetics Technology curriculum provides competency-based knowledge, scientific/artistic principles and hands-on fundamentals associated with the art of skin care. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional Esthetics Technology, business/human relations, product knowledge, and other related topics.

Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and cosmetic/skin care salons, as a platform artist, and in related businesses.

*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 (SHC)	**64-76**	**36-48**	**12-18**

Approved by the State Board of Community Colleges on February 19, 1999; CRC Revised—Electronic Only 05/27/15.

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 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.

Esthetics Technology (Certificate) C55230

	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. CORE **Required Courses:** COS 119 Esthetics Concepts I 2 SHC COS 120 Esthetics Salon I 6 SHC COS 125 Esthetics Concepts II 2 SHC COS 126 Esthetics Salon II 6 SHC **Required Subject Areas:** None			**16 SHC**
B. CONCENTRATION *(Not applicable)*			
C. OTHER MAJOR HOURS *To be selected from the following prefixes:* BUS, CIS, CSC, and WBL *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.*			

CURRICULUM STANDARD

Effective Term
Fall 1997
*[1997*03]*

Curriculum Program Title	**Manicuring/Nail Technology (Certificate)**	Program Code	**C55400**
Concentration	**(not applicable)**	CIP Code	***12.0410***

Curriculum Description

The Manicuring/Nail Technology curriculum provides competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the nail technology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional nail technology, business/computer principles, product knowledge, and other related topics.

Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and nail salons, as a platform artist, and in related businesses.

*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 (SHC)	**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 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.

Manicuring/Nail Technology (Certificate) C55400

	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. CORE **Required Courses:** COS 121 Manicure/Nail Technology I 6 SHC COS 222 Manicure/Nail Technology II 6 SHC **Required Subject Areas:** None			**12 SHC**
B. CONCENTRATION *(Not applicable)*			
C. OTHER MAJOR HOURS *To be selected from the following prefixes:* BUS, CIS, CSC, and WBL *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.*			

CURRICULUM STANDARD

Effective Term *Fall 2015* [2015*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**			**32-34 SHC**	**15 SHC**	
	*Courses required for the diploma are designated with **					
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 270	Adv Analytical Tools & Methods	3 SHC			
	BUS 110	Introduction to Business	3 SHC			
	CTS 130	Spreadsheet	3 SHC			
	DBA 110	Database Concepts	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			
Data Management(Select one)						
	DBA 115	Database Applications	3 SHC			
	DBA 120	Database Programming I	3 SHC			
	HBI 250	Data Mgmt and Utilization	3 SHC			
B.	**CONCENTRATION** *(if applicable)*					
C.	**OTHER MAJOR HOURS**					
	To be selected from the following prefixes:					
	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					
	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*					

Approved by the State Board of Community Colleges on February 17, 2012; Editorial Correction 03/15/12; CRC Revised – Electronic Only 01/25/13; CRC Revised 11/07/13; SBCC Revised 05/16/14; CRC Revised—Electronic Only 05/29/14; CRC Revised 05/27/15.

CURRICULUM STANDARD

*Effective Term Fall 2015 [2015*03]*

Curriculum Program Title	**Electric Utility Substation and Relay Technology**	CIP Code	**A50510**
Concentration	**(not applicable)**	Program Code	**46.0301**

Curriculum Description

The Electric Utility Substation and Relay Technology curriculum provides the skills to maintain high voltage equipment and protective systems for the electric utility transmission system. Training in operation and maintenance of critical infrastructure associated with the transmission grid is included.

Courses are designed to develop student understanding of maintenance and troubleshooting on transmission equipment, including three phase power theory, protective relaying, power transformers, voltage regulators, capacitors, and power circuit breakers common to electric utility and numerous other industries.

Graduates should qualify for entry-level employment in electric utility, renewable energy, and industrial facilities as technicians who diagnose and service equipment and components used for electrical power transmission.

*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 (SHC)	**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 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.

Electric Utility Substation and Relay Technology (A50510)

	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. CORE **Required Courses:** CIS 110 Introduction to Computers 3 SHC EUS 110 Intro to Elect Util Ind 4 SHC EUS 130 Elect Util Print Reading 4 SHC EUS 210 Lg High Volt Power Trans I 3 SHC EUS 215 Lg High Volt Power Trans II 3 SHC EUS 220 High Volt Power Cir Br 3 SHC EUS 230 Elect Util Prot Rel I 3 SHC EUS 235 Elect Util Prot Rel II 3 SHC EUS 240 Substation Ancillary Sys 3 SHC EUS 260 Cap & Case Studies in EUSRT 2 SHC	**31 SHC**		
B. CONCENTRATION *(Not applicable)*			
C. OTHER MAJOR HOURS *To be selected from the following prefixes:* BPR, CIS, DFT, ELC, ELN, EUS, ISC, MAT, PHY, and WBL *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.*			