



**STATE OF SOUTH CAROLINA**  
**DEPARTMENT OF EDUCATION**

**MOLLY M. SPEARMAN**  
*STATE SUPERINTENDENT OF EDUCATION*

**MEMORANDUM**

**TO:** District Superintendents  
CATE Directors and Coordinators

**FROM:** David M. Mathis, Ed.D.  
Deputy Superintendent, Division of College and Career Readiness

**DATE:** March 13, 2018

**RE:** South Carolina Career and Technology Education Minimum Program Requirements

On May 26, 2017, the State Board of Education approved two regulations that impact career and technology education (CATE) programs, Regulations 43-234 and 43-236. The purpose of this memorandum is to provide districts and career centers with information regarding the implementation of the three-unit minimum for state-recognized CATE programs. A copy of both regulations can be found on the South Carolina Department Education's website and are hyper-linked below. Please read both regulations in detail.

- [Regulation 43-234. Defined Program, Grades 9-12 and Graduation Requirements](#)
- [Regulation 43-236. Career or Technology Centers/Comprehensive High Schools](#)

The Office of Career and Technology Education has carefully reviewed the approved sequence of courses for each CATE program to determine which programs can be completed with three units while ensuring sufficient time for competency mastery, as well as adequate preparation for certification exams and assessments. A listing of approved three-unit programs is available on the [South Carolina Department of Education's website](#).

Districts and career centers are not required to offer three-unit programs and may choose to continue offering four-unit programs. All CATE programs must be comprised of an approved sequence of CATE courses as outlined in the CATE Student Reporting Procedures Guide. Districts and career centers deciding to transition to three-unit programs may do so during the 2017-18 school year. Please be aware that the Regulation may impact completer numbers regardless of the year your district chooses to transition.

As a reminder, the cohort of students impacted by the transition, as presented at the 2017 Fall Update, can be found below. Federal and state student definitions have also been provided.

### **Three-Unit Program Student Cohort**

- Students who have earned three units in a state-recognized CATE program prior to 2017-18 will be required to meet the four-unit minimum to be a completer;
- Students who have taken CATE courses and earned 1-2 units in an approved three-unit program prior to the 2017-18 school year have the option of meeting the three-unit minimum requirement to be a completer;
- Students who are beginning an approved three-unit program for the 2017-18 school year will be required to meet the minimum requirements to be a three-unit completer.

### **Student Definitions**

A **CATE Concentrator** is secondary student with an assigned Classification of Instructional Programs (CIP) code who has earned **three** Carnegie Units of credit in a state-recognized CATE program. “Concentrator” is a federally mandated designation under the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV). A state-recognized program must consist of an approved sequence of career and technology education courses leading to a career goal and must include the minimum number of Carnegie units of credit required for the program.

A **Completer** is a CATE concentrator who has earned all of the required units in a state-recognized CATE program identified by the assigned CIP code.

*Note: It is possible for a student to become a CATE Concentrator and a Completer during the same time frame.*

**OFFICE OF CAREER AND TECHNOLOGY EDUCATION (OCTE)  
APPROVED MINIMUM THREE-UNIT COMPLETER PROGRAMS**

<i>CLUSTER</i>	<i>CIP CODE</i>	<i>PROGRAM</i>
<b>Arts/AV Technology &amp; Communication</b>	500407	Fashion Design and Apparel Construction
	500408	Interior Design
<b>Business Management and Administration</b>	520401	Administrative Services
	521206	Business Information Management
	520201	General Management
	521001	Human Resources Management
	520204	Operations Management
<b>Finance</b>	520801	Academy of Finance
	520301	Accounting
	520803	Banking
	520804	Business Finance
	521701	Insurance
	520807	Securities and Investment
<b>Health Science</b>	260102	Biomedical Sciences – PLTW
	510999	EMS
	510706	Health Informatics
	510000	Health Science
	310505	Sports Medicine
<b>Hospitality and Tourism</b>	520905	Culinary Arts Management
	520904	Hospitality and Tourism Management
<b>Human Services</b>	190101	Family and Consumer Sciences
	120410	Nail Technology
<b>Information Technology</b>	151202	Information Support and Services
	110901	Networking Systems
	110201	Programming and Software Development
	110801	Web and Digital Communications
<b>Law, Public Safety, Corrections &amp; Security</b>	430203	Emergency & Fire Management Services
	430107	Law Enforcement Services
<b>Marketing</b>	090903	Marketing Communications
	521401	Marketing Management
	521402	<i>Marketing Analytics</i>
	521802	Merchandising
	521804	Professional Sales
<b>STEM</b>	190501	Food Science

## ARTS, AUDIO-VIDEO TECHNOLOGY, AND COMMUNICATIONS

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the minimum number of Carnegie units required for the program.

Note: At least one of the courses designated with an asterisk (\*) should be selected for the three (3) Carnegie unit completer status for 2018-19 school year if needed to meet state-recognized program requirements.

### **Fashion Design and Apparel Construction**

**500407**

The Fashion Design and Apparel Construction CIP-coded program requires a minimum of three (3) Carnegie units.

#### **Required Courses:**

Fashion Design and Apparel Construction 1

Fashion Design and Apparel Construction 2

#### **Additional approved courses if needed to meet state-recognized program requirements:**

Entrepreneurship*	Fashion Marketing*
Family and Consumer Sciences 1*	Marketing Management*
Family and Consumer Sciences 2	Mechanical Design 1*
Fashion, Fabric, and Design 1*	Arts, Audio-Video Technology and Communications, Work-based credit**
Fashion, Fabric, and Design 2	

### **Interior Design**

**500408**

The Interior Design CIP-coded program requires a minimum of three (3) Carnegie units.

#### **Required Courses:**

Interior Design 1

Interior Design 2

#### **Additional approved courses if needed to meet state-recognized program requirements:**

Entrepreneurship*	Housing and Interiors 2
Family and Consumer Sciences 1*	Marketing Management*
Family and Consumer Sciences 2	Mechanical Design 1*
Housing and Interiors 1*	Arts, Audio-Video Technology and Communications, work-based credit**

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

## BUSINESS MANAGEMENT AND ADMINISTRATION

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the *minimum number of Carnegie units required for the program*.

All of the Business Management and Administration CIP-coded programs require a minimum of three (3) Carnegie units.

### Administrative Services

520401

#### **Required Courses:**

Administrative Support Technology  
Integrated Business Applications 1

#### ***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1*	Fundamentals of Web Page Design and Development*
Advanced Web Page Design and Development	Google Applications
Business Law*	Image Editing 1*
Business Principles and Management *	Image Editing 2
<i>Digital Publication Design*</i>	Principles of Digital Technology
Digital Technologies	Integrated Business Applications 2*
Entrepreneurship*	Professional and Leadership Development*
<i>Workplace Communications*</i>	Social Media in Business
Financial Math ( <i>Phasing Out 2019-20</i> )	Business Management and Administration, work-based credit
Fundamental of Business, Marketing, and Finance*	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Business Information Management**

521206

**Required Courses:**

Digital Publication Design

Image Editing 1

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1*	Fundamentals of Project Management*
Advanced Web Page Design and Development	Fundamentals of Web Page Design and Development*
Advertising	Google Applications*
Business Law	<i>Fundamental of Human Resource Management*</i>
Business Principles and Management*	Image Editing 2*
Digital MultiMedia *	Integrated Business Applications 1*
Digital Technologies	Integrated Business Applications 2
Entrepreneurship*	IT Fundamentals
<i>Workplace Communications*</i>	Principles of Digital Technology
Exploring Computer Science	Professional Leadership Development*
Financial Math (Phasing Out 2019-20)	Social Media in Business
Foundations of Animation*	Business Management and Administration, work-based credit
Fundamentals of Business, Marketing, and Finance*	

**General Management**

520201

**Required Courses:**

Accounting 1

Entrepreneurship

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 2*	Integrated Business Applications 1*
Business Finance	Integrated Business Applications 2
Business Law*	<i>Global Logistics and Supply Chain Management</i>
Business Principles and Management*	Marketing*
<i>Workplace Communications *</i>	Marketing Management
Financial Math (Phasing Out 2019-20)	Professional and Leadership Development*
Fundamentals of Business, Marketing and Finance	Social Media in Business*
Fundamentals of Project Management	Virtual Enterprise 1*
Fundamentals of Webpage Design and Development*	Virtual Enterprise 2
Global Business*	Virtual Enterprise 3
Google Applications	Virtual Enterprise 4
<i>Fundamentals of Human Resource Management*</i>	Business Management and Administration, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Human Resources Management**

521001

**Required Courses:**

Business Law

*Fundamentals of Human Resource Management****Additional approved courses if needed to meet state-recognized program requirements:***

Business Principles and Management*	Global Business
<i>Digital Publication Design</i>	Google Applications
Entrepreneurship	Integrated Business Applications 1*
<i>Workplace Communications*</i>	Integrated Business Applications 2
Financial Math ( <i>Phasing Out 2019-20</i> )	Professional and Leadership Development*
Fundamentals of Business, Marketing, and Finance*	Business Management and Administration, work-based credit

**Operations Management**

520204

**Required Courses:**

Virtual Enterprise 1

Virtual Enterprise 2

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1*	Google Applications
Accounting 2	Integrated Business Applications 1*
Business Law*	Integrated Business Applications 2
Business Principles and Management*	<i>Global Logistics and Supply Chain Management</i>
Digital Technologies	Marketing
Entrepreneurship*	Professional and Leadership Development
<i>Workplace Communications*</i>	Social Media in Business
Financial Math ( <i>Phasing Out 2019-20</i> )	Virtual Enterprise 3*
Fundamentals of Business, Marketing, and Finance	Virtual Enterprise 4*
Fundamentals of Project Management	Business Management and Administration, work-based credit
Global Business*	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

## FINANCE

### Accounting

520301

#### Required Courses:

Accounting 1  
Accounting 2

#### *Additional approved courses if needed to meet state-recognized program requirements:*

Banking Services	Integrated Business Applications 2
Business Finance*	Personal Finance*
Business Principles and Management*	Professional and Leadership Development
Entrepreneurship*	Securities and Investments
<i>Workplace Communications*</i>	Virtual Enterprise 1
Financial Math <i>(Phasing Out 2019-20)</i>	Virtual Enterprise 2
Fundamentals of Business, Marketing and Finance	Virtual Enterprise 3
Insurance	Virtual Enterprise 4
Integrated Business Applications 1*	Finance, work-based credit

### *Banking Services (Phasing Out 2019-20)*

520803

#### Required Courses:

Banking Services  
Business Finance

#### *Additional approved courses if needed to meet state-recognized program requirements:*

Accounting 1*	Insurance
Accounting 2	Integrated Business Applications 1*
Business Law	Integrated Business Applications 2
Business Principles and Management	Personal Finance*
Entrepreneurship	Professional and Leadership Development*
<i>Workplace Communications*</i>	Professional Sales
Financial Math * <i>(Phasing Out 2019-20)</i>	Securities and Investments
Fundamentals of Business, Marketing and Finance	Finance, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Business Finance**

520804

**Required Courses:**

Accounting 1  
Business Finance or Banking Services

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 2	Integrated Business Applications 1*
Banking Services*	Integrated Business Applications 2
Business Law*	Marketing*
Entrepreneurship*	Personal Finance*
<i>Workplace Communications</i>	Professional and Leadership Development*
Financial Math (Phasing Out 2019-20)	Professional Sales*
Fundamentals of Business, Marketing and Finance	Securities and Investments*
Global Business*	Finance, work-based credit
Insurance	

**Insurance**

521701

**Required Courses:**

Business Finance  
Insurance

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1	Integrated Business Applications 1
Accounting 2	Integrated Business Applications 2
Banking Services	Marketing
Business Law*	Personal Finance*
Business Principles and Management	Professional and Leadership Development
Entrepreneurship*	Professional Sales*
<i>Workplace Communications</i>	Securities and Investments
Financial Math (Phasing Out 2019-20)	Social Media*
Fundamentals of Business, Marketing and Finance	Finance, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Required Courses:**

Business Finance  
Securities and Investments

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1	Fundamentals of Business, Marketing and Finance
Accounting 2	Insurance
Banking Services*	Integrated Business Applications 1*
Business Law*	Integrated Business Applications 2
Business Principles and Management	Personal Finance*
Entrepreneurship*	Professional and Leadership Development
<i>Workplace Communications</i>	Professional Sales*
Financial Math (Phasing Out 2019-20)	Finance, work-based credit

**HEALTH SCIENCE**

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the *minimum number of Carnegie units required for the program*.

**Note:** At least one of the courses designated with an asterisk (\*) should be selected for the three (3) Carnegie unit completer status for 2018-19 school year if needed to meet state-recognized program requirements.

***Biomedical Sciences (Project Lead the Way)***

260102

*The Biomedical Sciences (Project Lead the Way) CIP-coded program requires a minimum of three (3) Carnegie units.*

**Required Courses:**

Human Body Systems  
Principles of Biomedical Sciences

***Additional approved courses if needed to meet state-recognized program requirements:***

Biomedical Innovation	Medical Terminology*
Emergency Medical Services 1	Pharmacology for Medical Careers
Emergency Medical Services 2	Sports Medicine 1
Health Science 1	Sports Medicine 2
Health Science 2	Health Science, work-based credit
Health Science 3*	Sports Medicine, work-based credit
Medical Interventions*	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

The EMS CIP-coded program requires a minimum of three (3) Carnegie units.

**Required Courses:**

- Emergency Medical Services 1
- Emergency Medical Services 2

***Additional approved courses if needed to meet state-recognized program requirements:***

Emergency Medical Services 3*	Pharmacology for Medical Careers
Health Science 1	Principles of Biomedical Sciences
Health Science 2	Sports Medicine 1
Health Science 3*	Sports Medicine 2
Human Body Systems*	Health Science, work-based credit
Medical Terminology*	Sports Medicine, work-based credit

***Health Informatics***

The Health Informatics CIP-coded program requires a minimum of three (3) Carnegie units.

**Required Courses:**

- Health Informatics 1
- Health Informatics 2

***Additional approved courses if needed to meet state-recognized program requirements:***

Emergency Medical Services 1	Medical Terminology*
Emergency Medical Services 2	Pharmacology for Medical Careers
Health Informatics	Principles of Biomedical Sciences
Health Science 1	Sports Medicine 1
Health Science 2	Sports Medicine 2
Health Science 3*	Health Science, work-based credit
Human Body Systems*	Sports Medicine, work-based credit
Medical Billing and Coding	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Health Science**

**510000**

*The Health Science CIP-coded program requires a minimum of three (3) Carnegie units.*

**Required Courses:**

- Health Science 1
- Health Science 2

***Additional approved courses if needed to meet state-recognized program requirements:***

Emergency Medical Services 1	Pharmacology for Medical Careers
Emergency Medical Services 2	Practical Nursing, Phase 1
Health Science 3*	Principles of Biomedical Sciences
Health Science Clinical Study	Sports Medicine 1
Human Body Systems*	Sports Medicine 2
Medical Billing and Coding	Health Science, work-based credit
Medical Terminology*	Sports Medicine, work-based credit

**Sports Medicine**

**310505**

*The Sports Medicine CIP-coded program requires a minimum of three (3) Carnegie units.*

**Required Courses:**

- Sports Medicine 1
- Sports Medicine 2

***Additional approved courses if needed to meet state-recognized program requirements:***

Emergency Medical Services 1	Medical Terminology*
Emergency Medical Services 2	Pharmacology for Medical Careers
Health Science 1	Principles of Biomedical Sciences
Health Science 2	Sports Medicine 3*
Health Science 3*	Health Science, work-based credit
Human Body Systems	Sports Medicine, work-based credit

*\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.*

## HOSPITALITY AND TOURISM

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the *minimum number of Carnegie units required for the program*.

*All of the Hospitality and Tourism CIP-coded programs require a minimum of three (3) Carnegie units.*

**Note:** At least one of the courses designated with an asterisk (\*) should be selected for the three (3) Carnegie unit completer status for 2018-19 school year if needed to meet state-recognized program requirements.

### *Culinary Arts Management*

520905

#### **Required Courses:**

Culinary Arts Management 1  
 Culinary Arts Management 2  
 OR  
 Culinary Arts Management 1  
 Baking and Pastry  
 OR  
 Culinary Arts Management 1  
 Culinary Arts Management 2  
 Baking and Pastry

#### ***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1	Integrated Business Applications 1
Entrepreneurship*	Introduction to Culinary Arts Management*
Event and Entertainment Management*	Introduction to Hospitality and Tourism Management*
Foods and Nutrition 1*	Sports Nutrition 1*
Foods and Nutrition 2	Sports Nutrition 2
Fundamentals of Web Page Design and Development	Hospitality and Tourism, work-based credit**

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Required Courses:**

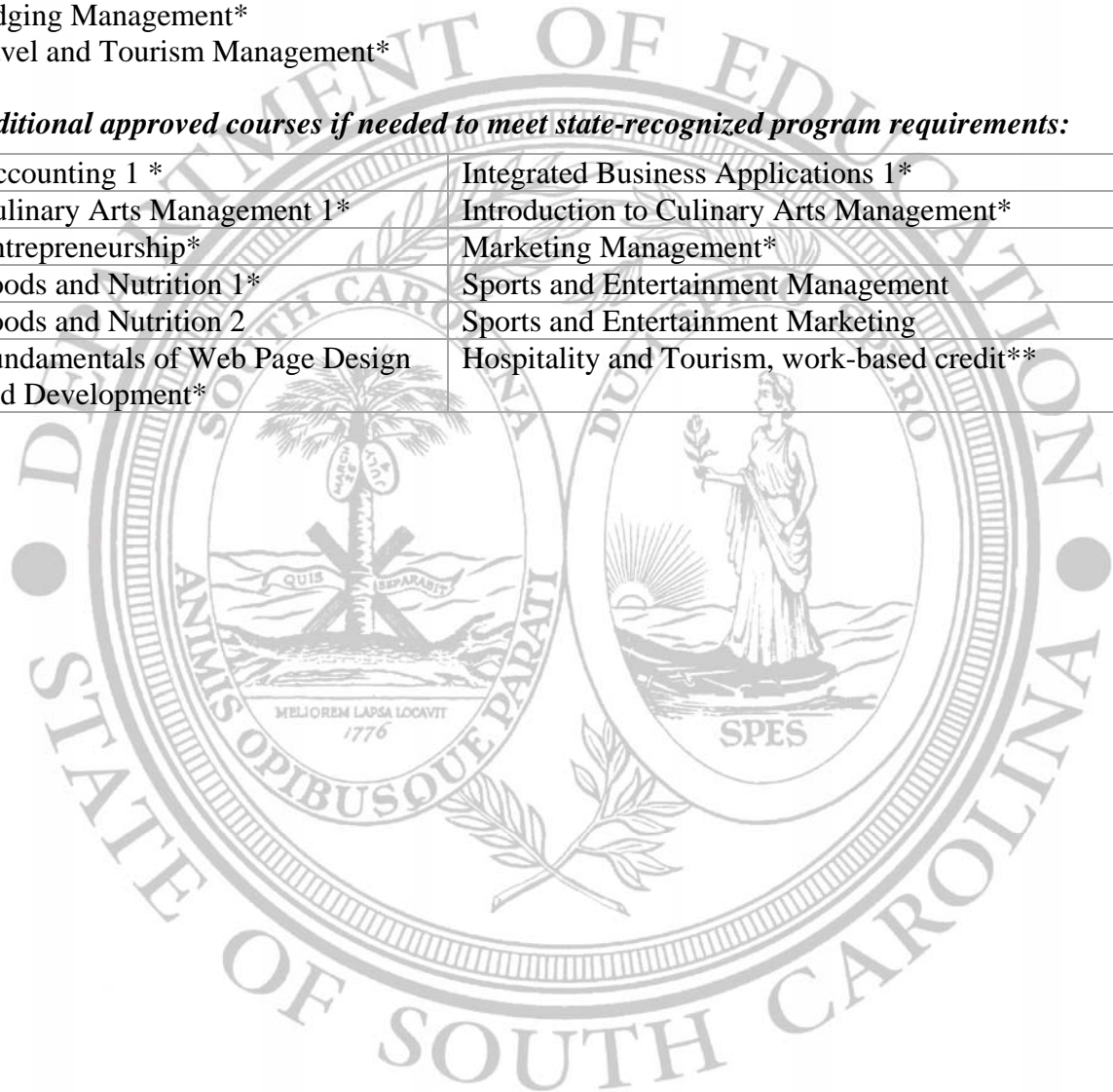
Introduction to Hospitality and Tourism Management

*Select two (2) of the courses listed below for completer status:*

- Event and Entertainment Management\*
- Lodging Management\*
- Travel and Tourism Management\*

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1 *	Integrated Business Applications 1*
Culinary Arts Management 1*	Introduction to Culinary Arts Management*
Entrepreneurship*	Marketing Management*
Foods and Nutrition 1*	Sports and Entertainment Management
Foods and Nutrition 2	Sports and Entertainment Marketing
Fundamentals of Web Page Design and Development*	Hospitality and Tourism, work-based credit**



\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

## HUMAN SERVICES/FAMILY AND CONSUMER SCIENCES

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer at least the *minimum number of Carnegie units required for the program*.

### *Family and Consumer Sciences*

190101

*The Family and Consumer Sciences CIP-coded program requires a minimum of three (3) Carnegie units.*

**Note: Program completers in Family and Consumer Sciences must select courses that show a clear path to a career and be able to complete an approved industry-recognized credential, technical skills assessment/certification, and/or career focused assessment/certification successfully. A minimum of three units of credit are required to be a completer.**

#### **Required Courses (at least two of the following):**

CATE Dual Credit Teacher Cadet	Foods and Nutrition 1
Child Development 1	Foods and Nutrition 2
Child Development 2	Housing and Interiors 1
Family and Consumer Sciences 1	Housing and Interiors 2
Family and Consumer Sciences 2	Human Development: Responsible Life Choices 1
Family Life Education 1	Human Development: Responsible Life Choices 2
Family Life Education 2	Parenting Education 1
Fashion, Fabric, and Design 1	Parenting Education 2
Fashion, Fabric, and Design 2	Sports Nutrition 1
Financial Fitness 1	Sports Nutrition 2
Financial Fitness 2	Family and Consumer Sciences, work-based credit**

#### ***Additional approved courses if needed to meet state-recognized program requirements for 4 units:***

Culinary Arts Management 1*	Introduction to Culinary Arts Management*
Early Childhood Education 1*	Introduction to Early Childhood Education*
Fashion Design and Apparel Construction 1*	Introduction to Teaching 1*
Food Science 1*	Personal Finance*
Interior Design 1*	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

*The Nail Technology CIP-coded program requires a minimum of three (3) Carnegie units.*

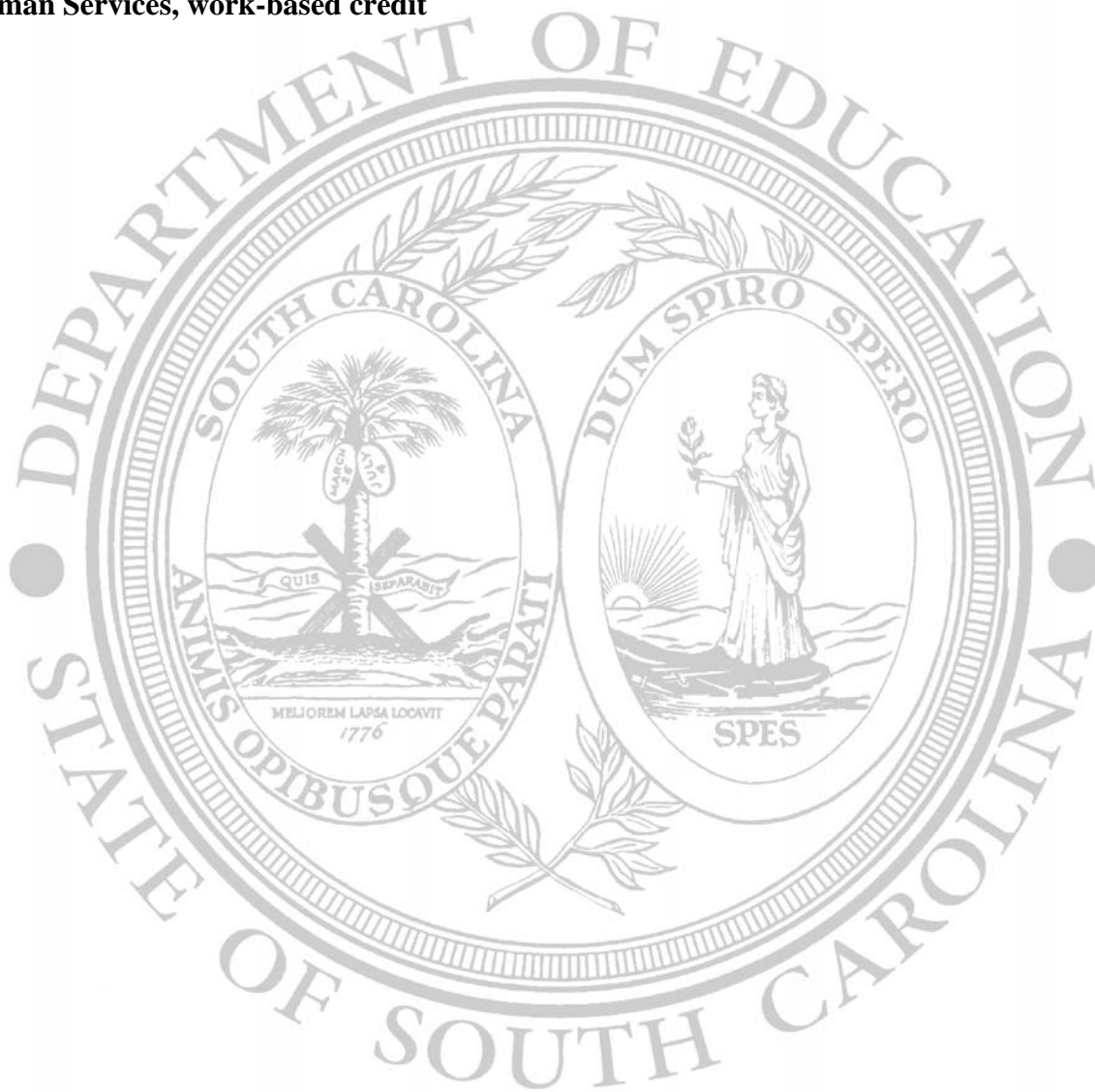
Nail Technology 1

Nail Technology 2

Nail Technology 3\*

Nail Technology 4\*

**Human Services, work-based credit**



\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

## INFORMATION TECHNOLOGY

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the *minimum number of Carnegie units required for the program.*

*All of the Information Technology CIP-coded programs require a minimum of three (3) Carnegie units.*

**Note:** At least one of the courses designated with an asterisk (\*) should be selected for the three (3) Carnegie unit completer status for 2018-19 school year if needed to meet state-recognized program requirements.

*Information Support and Services*

*151202*

### **Required Courses:**

Computer Repair and Service  
Advanced Computer Repair and Service

### ***Additional approved courses if needed to meet state-recognized program requirements:***

Advanced Cyber Security	Database Design and Programming with/SQL
Advanced Computer Operating Systems	Database Programming with PL/SQL
Advanced Networking	Entrepreneurship*
Advanced Server Administration*	Exploring Computer Science*
Advanced Web Page Design and Development	Fundamentals of Web Page Design and Development
Computer Forensics	Game Design and Development
Computer Programming 1*	Home Systems Technology
Computer Programming 2	Principles of Digital Technology (do not select after July 2018)
Computer Programming with C++ 1*	IT Fundamentals
Computer Programming with C++ 2	Networking Fundamentals
Computer Programming with Java 1*	Professional Leadership Development
Computer Programming with Java 2	SAS Programming 1
Computer Programming with Visual Basic 1*	SAS Programming 2
Computer Programming with Visual Basic 2	Server Administration*
Computer Operating Systems	Information Technology, work-based credit
Cyber Security Fundamentals	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Required Courses:**

Networking Fundamentals  
 Advanced Networking

***Additional approved courses if needed to meet state-recognized program requirements:***

Advanced Cyber Security	Computer Repair and Service
Advanced Computer Operating Systems*	Cyber Security Fundamentals
Advanced Computer Repair and Service	Database Programming with/SQL
Advanced Server Administration	Database Programming with PL/SQL
Advanced Web Page Design and Development	Entrepreneurship*
Computer Forensics	Exploring Computer Science*
Computer Operating Systems*	Fundamentals of Web Page Design and Development
Computer Programming 1	Home Systems Technology*
Computer Programming 2	IT Fundamentals
Computer Programming with C++ 1	Principles of Digital Technology (do not select after July 2018)
Computer Programming with C++ 2	Professional and Leadership Development
Computer Programming with Java 1	SAS Programming 1
Computer Programming with Java 2	SAS Programming 2
Computer Programming with Visual Basic 1	Server Administration*
Computer Programming with Visual Basic 2	Information Technology, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Required Courses:**

- Computer Programming 1
- Computer Programming 2

***Additional approved courses if needed to meet state-recognized program requirements:***

Advanced Animation	Entrepreneurship
Advanced Cyber Security	Exploring Computer Science*
Advanced Web Page Design and Development	Foundations of Animation
Computer Forensics	Fundamentals of Web Page Design and Development
Computer Programming with C++1*	Game Design and Development
Computer Programming with C++2	GIS Technology 1*
Computer Program with Java 1*	GIS Technology 2
Computer Programming with Java 2	IT Fundamentals*
Computer Programming with Visual Basic 1*	Java Fundamentals and Java Programming*
Computer Programming with Visual Basic 2	Professional and Leadership Development
Cyber Security Fundamentals	SAS Programming 1*
Database Design and Programming with SQL*	SAS Programming 2
Database Programming with PL/SQL	Information Technology, work-based credit

OR

**Required Courses:**

- Computer Programming with C++1
- Computer Programming with C++2

Advanced Animation	Entrepreneurship
Advanced Cyber Security	Exploring Computer Science*
Advanced Web Page Design and Development	Foundations of Animation
Computer Forensics	Fundamentals of Web Page Design and Development
Computer Programming 1*	Game Design and Development
Computer Programming 2	GIS Technology 1*
Computer Program with Java 1*	GIS Technology 2
Computer Programming with Java 2	IT Fundamentals*
Computer Programming with Visual Basic 1*	Java Fundamentals and Java Programming*
Computer Programming with Visual Basic 2	Professional and Leadership Development
Cyber Security Fundamentals	SAS Programming 1*
Database Design and Programming with SQL*	SAS Programming 2

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

Database Programming with PL/SQL	Information Technology, work-based credit
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OR

**Required Courses:**

Computer Programming with Java 1

Computer Programming with Java 2

Advanced Animation	Entrepreneurship
Advanced Cyber Security	Exploring Computer Science*
Advanced Web Page Design and Development	Foundations of Animation
Computer Forensics	Fundamentals of Web Page Design and Development
Computer Programming 1*	Game Design and Development
Computer Programming 2	GIS Technology 1*
Computer Programming with C++1*	GIS Technology 2
Computer Programming with C++2	IT Fundamentals*
Computer Programming with Visual Basic 1*	Java Fundamentals and Java Programming*
Computer Programming with Visual Basic 2	Professional and Leadership Development
Cyber Security Fundamentals	SAS Programming 1*
Database Design and Programming with SQL*	SAS Programming 2
Database Programming with PL/SQL	Information Technology, work-based credit

OR

**Required Courses:**

Computer Programming Visual Basic 1

Computer Programming Visual Basic 2

Advanced Animation	Entrepreneurship
Advanced Cyber Security	Exploring Computer Science*
Advanced Web Page Design and Development	Foundations of Animation
Computer Forensics	Fundamentals of Web Page Design and Development
Computer Programming 1*	Game Design and Development
Computer Programming 2	GIS Technology 1*
Computer Programming with C++1*	GIS Technology 2
Computer Programming with C++2	IT Fundamentals*
Computer Programming with Java 1*	Java Fundamentals and Java Programming*
Computer Programming with Java 2	Professional and Leadership Development
Cyber Security Fundamentals	SAS Programming 1*
Database Design and Programming with SQL*	SAS Programming 2
Database Programming with PL/SQL	Information Technology, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

OR

**Required Courses:**

Database Design and Programming with SQL  
 Database Programming with PL/SQL

Advanced Animation	Entrepreneurship
Advanced Cyber Security	Exploring Computer Science*
Advanced Web Page Design and Development	Foundations of Animation
Computer Forensics	Fundamentals of Web Page Design and Development
Computer Programming 1*	Game Design and Development
Computer Programming 2	GIS Technology 1*
Computer Programming with C++1*	GIS Technology 2
Computer Programming with C++2	IT Fundamentals*
Computer Programming with Java 1*	Java Fundamentals and Java Programming*
Computer Programming with Java 2	Professional and Leadership Development
Computer Programming with Visual Basic 1*	SAS Programming 1*
Computer Programming with Visual Basic 2	SAS Programming 2
Cyber Security Fundamentals	Information Technology, work-based credit

**Web and Digital Communications**

**110801**

**Required Courses:**

Fundamentals of Web Page Design and Development  
 Advanced Web Page Design and Development

**Additional approved courses if needed to meet state-recognized program requirements:**

Advanced Animation*	Google Applications
Computer Programming 1	Image Editing 1*
Computer Programming 2	Image Editing 2*
Cyber Security Fundamentals*	
Digital Publication Design	Principles of Digital Technology (do not select after July 2018)
Digital Media Marketing*	Integrated Business Applications 1
Digital Multimedia*	Integrated Business Applications 2
Digital Technologies*	IT Fundamentals
Entrepreneurship	Java Fundamentals and Java Programming
Exploring Computer Science*	Professional and Leadership Development
Foundations of Animation*	Social Media in Business*
Game Design and Development	Information Technology, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

## LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the *minimum number of Carnegie units required for the program*.

*All of the Law, Public Safety, Corrections, and Security programs require a minimum of three (3) Carnegie units.*

**Note:** At least one of the courses designated with an asterisk (\*) should be selected for the three (3) Carnegie unit completer status for 2018-19 school year if needed to meet state-recognized program requirements.

### ***Emergency and Fire Management Services***

**430203**

Fire Fighter 1  
Fire Fighter 2

### ***Additional approved courses if needed to meet state-recognized program requirements:***

Introduction to Law, Public Safety, Corrections and Security  
Law, Public Safety, Corrections and Security, work-based credit  
OR  
Emergency and Fire Management Services 1 (Phasing Out July 2018)  
Emergency and Fire Management Services 2 (Phasing Out July 2019)  
Introduction to Law, Public Safety, Corrections and Security\*  
Law, Public Safety, Corrections and Security, work-based credit

### ***Law Enforcement Services***

**430107**

Introduction to Law, Public Safety, Corrections and Security\*  
Law Enforcement Services 1\*  
Law Enforcement Services 2\*  
Law, Public Safety, Corrections and Security, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**MARKETING**

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the *minimum number of Carnegie units required for the program.*

*All Marketing CIP-coded programs require a minimum of three (3) units.*

**Note:** At least one of the courses designated with an asterisk (\*) should be selected for the three (3) Carnegie unit completer status for 2018-19 school year if needed to meet state-recognized program requirements.

**Marketing Communications**

**090903**

**Required Courses:**

Advertising or Digital Media Marketing  
Marketing

***Additional approved courses if needed to meet state-recognized program requirements:***

Advanced Web Page Design and Development	<i>Marketing Analytics</i>
Advertising*	Professional and Leadership Development*
Digital Media Marketing*	Professional Sales
<i>Digital Publication Design*</i>	Social Media in Business*
Digital Multimedia*	Sports and Entertainment Marketing*
Entrepreneurship*	Virtual Enterprise 1*
Fundamentals of Web Page Design and Development*	Virtual Enterprise 2
Google Applications*	Virtual Enterprise 3
Image Editing 1*	Virtual Enterprise 4
Image Editing 2	<i>Workplace Communications*</i>
Integrated Business Applications 1*	Marketing, work-based credit
Integrated Business Applications 2	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Marketing Management**

521401

**Required Courses:**

Marketing  
Marketing Management

***Additional approved courses if needed to meet state-recognized program requirements:***

Accounting 1*	Logistics and Business Processes
Accounting 2	<i>Marketing Analytics</i>
Advertising	Professional and Leadership Development*
Business Finance*	Professional Sales
Business Law*	Social Media in Business*
Business Principles and Management*	Sports and Entertainment Management*
Entrepreneurship*	Travel and Tourism Management*
Event and Entertainment Management*	Virtual Enterprise 1
Fundamentals of Project Management*	Virtual Enterprise 2
Google Applications	Virtual Enterprise 3
Human Resources Management*	Virtual Enterprise 4
Integrated Business Applications 1	<i>Workplace Communications*</i>
Integrated Business Applications 2	Marketing, work-based credit

**Marketing Analytics**

521402

**Required Courses:**

Marketing  
*Marketing Analytics*

***Additional approved courses if needed to meet state-recognized program requirements:***

Advertising	SAS Programming 2
Entrepreneurship*	Social Media in Business*
Google Applications*	Sports and Entertainment Marketing
Integrated Business Applications 1*	Virtual Enterprise 1*
Integrated Business Applications 2	Virtual Enterprise 2
Merchandising	Virtual Enterprise 3
Professional and Leadership Development*	Virtual Enterprise 4
Professional Sales	<i>Workplace Communications*</i>
SAS Programming 1*	Marketing, work-based credit

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

**Required Courses:**

Marketing  
Merchandising

***Additional approved courses if needed to meet state-recognized program requirements:***

Advanced Web Page Design and Development	Integrated Business Applications 1*
Advertising	Integrated Business Applications 2
<i>Digital Publication Design</i>	<i>Marketing Analytics</i>
Digital Multimedia*	Professional and Leadership Development*
Entrepreneurship*	Professional Sales
Fashion Marketing*	Social Media in Business*
Fundamentals of Web Page Design and Development*	Sports and Entertainment Marketing*
Google Applications*	<i>Workplace Communications*</i>
Image Editing 1	Marketing, work-based credit
Image Editing 2	

***Professional Sales, Phasing out CIP Code, effective June 2019***

521804

**Required Courses:**

Marketing  
Professional Sales

***Additional approved courses if needed to meet state-recognized program requirements:***

<i>Digital Publication Design</i>	Social Media in Business*
Digital Media Marketing*	Sports and Entertainment Marketing
Entrepreneurship*	Virtual Enterprise 1*
Google Applications	Virtual Enterprise 2
Integrated Business Applications 1	Virtual Enterprise 3
Integrated Business Applications 2	Virtual Enterprise 4
<i>Marketing Analytics</i>	<i>Workplace Communications*</i>
Merchandising	Marketing, work-based credit
Professional and Leadership Development*	

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.

## SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

Each state-recognized CATE program identified below must include only approved courses listed for each CIP code and must offer the *minimum number of Carnegie units required for the program*.

**Note:** At least one of the courses designated with an asterisk (\*) should be selected for the three (3) Carnegie unit completer status for 2018-19 school year if needed to meet state-recognized program requirements.

### *Food Science*

190501

*The Food Science CIP-coded program requires a minimum of three (3) Carnegie units.*

#### **Required Courses:**

Food Science 1

Food Science 2

#### ***Additional approved courses if needed to meet state-recognized program requirements:***

Foods and Nutrition 1\*

Foods and Nutrition 2

Food Processing\*

Sports Nutrition 1\*

Sports Nutrition 2

\*\*The work-based credit course cannot be used as one of the courses for three-unit completer programs. It can be used as a fourth unit if students are interested in taking the work-based credit course.