

# Career Clusters & Career Pathways CTE Course Sequence Guide

Each Student's Path. Each Graduate. Each Day.

# GCS CTE Career Clusters & Career Pathways

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**CTE Career Cluster**  
Agricultural, Food and Natural Resources

**CTE Career Pathway**  
Animal Science (ANSC)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	AA21 Animal Science I	AA22 Animal Science II – Food Animal* or AA23 Animal Science II – Companion Animal*	AA41 Veterinary Assisting  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	AU10 Agriscience Applications BM20 Microsoft Excel BF10 Business Essentials ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Youth for the Quality Care of Animals (YQCA) Certification, Animal Waste Certification, Canine Care and Training Program (CCTP), Certified Veterinary Assistant				
<b>CTE Careers Existing Today and Tomorrow:</b> Veterinarian, Animal Health Scientist, Animal Biologist, Science Policy Director				

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Agricultural, Food and Natural Resources

**CTE Career Pathway**  
Plant Systems (PLSV)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	AP41 Horticulture I	AP42 Horticulture II* or AP44 Horticulture II – Landscaping* or AP43 Horticulture II – Turfgrass Management*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	AU10 Agriscience Applications BM20 Microsoft Excel BF10 Business Essentials ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Turfgrass Management Technology Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, North Carolina Certified Plant Professional (CPP), Certified Young Plant Professional (CYPP), NC Private Pesticide Applicator				
<b>CTE Careers Existing Today and Tomorrow:</b> Landscaper, Global System Architect, Fear Containment Manager				

\*Denotes CTE Concentrator Course

CTE Career Cluster Architecture					
CTE Career Pathway Carpentry (CARP)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IC00 Construction Core	IC21 Carpentry I	IC 22 Carpentry II*	IC23 Carpentry III  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel IC41 Electrical Trades I ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, OSHA 10-Hour Construction Industry Certifications, NC NCCER Credential - Carpentry I, NC NCCER Credential - Carpentry II, CPR, First-Aid					
<b>CTE Careers Existing Today and Tomorrow:</b> Shareability Auditor, Opportunity Spotters, Impact Assessors, Construction Managers, Carpenters, Limited Energy Electricians, Construction Material Designers, Tear-Down Teams					

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Architecture

**CTE Career Pathway**  
Drafting Architectural (DRFA)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IC61 Drafting I	IC62 Drafting II – Architectural*	IC63 Drafting III – Architectural	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	FI21 Interior Design Fundamentals BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Architectural Technology Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Autodesk Certified User AutoCAD, Autodesk Certified User Revit, Autodesk Certified Professional Revit					
<b>CTE Careers Existing Today and Tomorrow:</b> Architect, Construction Material Designer, Structural Engineer, Global System Architect					

\*Denotes CTE Concentrator Course

CTE Career Cluster Architecture					
CTE Career Pathway Electrical Trades (ELTR)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IC00 Construction Core	IC41 Electrical Trades I	IC42 Electrical Trades II*	IC43 Electrical Trades III  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Electrical Systems Technology Diploma</a> <a href="#">Electrical Systems Technology - Wiring Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> NC NCCER - Construction Core, OSHA 10-Hour Construction Industry Certification, NC NCCER Credential - Electrical Trades, WorkKeys National Career Readiness Certificate					
<b>CTE Careers Existing Today and Tomorrow:</b> Electrician, Micro Grid Strategists, Power Conversion Specialists					

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Architecture

**CTE Career Pathway**  
Heating, Ventilation, AC, & Refrigeration (HVAC/R)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IC00 Construction Core	IL55 Heating, Ventilation, Air Conditioning, & Refrigeration I	IL56 Heating, Ventilation, Air Conditioning, & Refrigeration II*	IL57 Heating, Ventilation, Air Conditioning, & Refrigeration III  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Air Conditioning, Heating and Refrigeration Technology Diploma</a> <a href="#">Air Conditioning, Heating, and Refrigeration Technology - Basic Air Conditioning Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, NCCER Certification, Occupational Safety and Health Administration (OSHA) 10-Hour Construction Industry Credential					
<b>CTE Careers Existing Today and Tomorrow:</b> Commercial HVAC Technician, HVAC Project Manager, Controller, Robot Sherpa Operations Manager, IoT Smart Appliance Installer					

\*Denotes CTE Concentrator Course



CTE Career Cluster Architecture				
CTE Career Pathway Interior Design (INDE)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	FI21 Interior Design Fundamentals	FI22 Interior Studio* or FI23 Interior Design Technology*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	FA31 Apparel and Textile Production I IC61 Drafting I II41 Adobe Visual Design I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>			
<b>CTE Industry Recognized Credentials:</b> Pre-Professional Assessment and Certification in Interior Design Fundamentals, Autodesk Certified User Revit, WorkKeys National Career Readiness Certificate				
<b>CTE Careers Existing Today and Tomorrow:</b> Furniture Designer, Facilities Architect, Virtual Showroom Coordinator, 3D Design Manager				

\*Denotes CTE Concentrator Course

CTE Career Cluster Architecture					
CTE Career Pathway Solar Energy (SOEN)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IC00 Construction Core	IC71 Solar Photovoltaics I	IC72 Solar Photovoltaics II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	IC41 Electrical Trades I IC21 Carpentry I BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Occupational Safety and Health Administration (OSHA) 10-Hour Construction Industry Credential					
<b>CTE Careers Existing Today and Tomorrow:</b> Solar Expansionist, Global System Architect, Solar Structural Engineer					

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Arts, A/V Technology, & Communications

**CTE Career Pathway**  
Adobe Academy (ADAC)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	II41 Adobe Visual Design I	II42 Adobe Visual Design II* or II43 Adobe Digital Design* or II45 Adobe Video Design I*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	MM51 Marketing BM20 Microsoft Excel ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Adobe Photoshop, InDesign, Illustrator, Adobe Dreamweaver, Adobe Premiere				
<b>CTE Careers Existing Today and Tomorrow:</b> Motion Graphics Designer, 3Dimensionalist, 3D Printer “Ink” Developer, Animation Expert				

\*Denotes CTE Concentrator Course

<b>CTE Career Cluster</b> Arts, A/V Technology, & Communications				
<b>CTE Career Pathway</b> Apparel and Textile Production (ATPR)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	FA31 Apparel and Textile Production I	FA32 Apparel and Textile Production II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	II41 Adobe Visual Design I BM20 Microsoft Excel ME11 Entrepreneurship I MI21 Fashion Merchandising			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Pre-Professional Assessment and Certification in Fashion, Textiles, and Apparel				
<b>CTE Careers Existing Today and Tomorrow:</b> Textile CAD Designer, Apparel Colorist, 3D Fashion Designer, Digital Fabricator, eCommerce Strategist				

\*Denotes CTE Concentrator Course

<b>CTE Career Cluster</b> Arts, A/V Technology, & Communications					
<b>CTE Career Pathway</b> Media Productions (MPRS)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	II41 Adobe Visual Design I	II45 Adobe Video Design I	IL70 Media Production I	IL71 Media Production II*  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel BF10 Business Essentials ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Digital Media Production Certificate, Film & Video Certificate					
<b>CTE Careers Existing Today and Tomorrow:</b> Video Scheduling Specialist, Master Control Operator, TV Programming Director, Streaming Service Animation Expert, Global Broadcast Operations Manager					

\*Denotes CTE Concentrator Course

CTE Career Cluster				
Arts, A/V Technology, & Communications				
CTE Career Pathway				
Digital Design and Animation (DIDE)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	TS24 Digital Design and Animation I	TS25 Digital Design and Animation II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	II43 Adobe Digital Design BM20 Microsoft Excel ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Autodesk Certified User 3DS Max, Autodesk Certified User Maya				
<b>CTE Careers Existing Today and Tomorrow:</b> Graphic Designer, Digital Art Director, Virtual Animation Architect, Futuristic Design Coordinator				

\*Denotes CTE Concentrator Course

<b>CTE Career Cluster</b> Arts, A/V Technology, & Communications				
<b>CTE Career Pathway</b> Game Art Design (GAAR)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	TS24 Digital Design and Animation I	TS31 Game Art Design*	TS32 Advanced Game Art Design  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	II43 Adobe Digital Design MM51 Marketing TS25 Digital Design and Animation II BM20 Microsoft Excel			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Online Game Design Certificate				
<b>CTE Careers Existing Today and Tomorrow:</b> Developer Relations Technical Creator, 3D Game Sculptor, Marketing and Production Game Artist, Data Analytics Specialist, Mixed Reality Game Inventor				

\*Denotes CTE Concentrator Course

CTE Career Cluster Business Management and Administration				
CTE Career Pathway Entrepreneurship (ENTRE)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	ME11 Entrepreneurship I	ME12 Entrepreneurship II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BF10 Business Essentials MM51 Marketing BM20 Microsoft Excel			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Business Administration - Entrepreneurship Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Concepts of Entrepreneurship & Management; Venture Entrepreneurial; Expedition Entrepreneurship and Small Business				
<b>CTE Careers Existing Today and Tomorrow:</b> Small Business Owner, Strategic Management Professional, Social Entrepreneur, Opportunity Spotters				

\*Denotes CTE Concentrator Course



**CTE Career Cluster**  
Business Management and Administration

**CTE Career Pathway**  
General Management (GMGT)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	BF10 Business Essentials	BB40 Business Management I or BI50 IB Business Management	BB42 Business Management II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BA10 Accounting I BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Business Administration Core Certificate</a> <a href="#">Business Administration - Human Resources Management Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Fundamentals Business Concepts (ASK-BF-CERT)					
<b>CTE Careers Existing Today and Tomorrow:</b> Account Manager, Business Consultant, Shareability Auditor, Global Business Navigator					

\*Denotes CTE Concentrator Course

<b>CTE Career Cluster</b> Business Management and Administration				
<b>CTE Career Pathway</b> Project Management (PMGT)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	CS11 Project Management I	CS12 Project Management II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BF10 Business Essentials ME11 Entrepreneurship I BM20 Microsoft Excel			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Project Management Professional (PMP), Professional ScrumMaster Certification				
<b>CTE Careers Existing Today and Tomorrow:</b> Project Management Consultant, Project Director, Industry Process Advisor, Project Designer				

\*Denotes CTE Concentrator Course

CTE Career Cluster Education and Training					
CTE Career Pathway Teaching/Training (TETR)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	FE21 Teaching as a Profession I	FE22 Teach as a Profession II*	FE23 Teach as a Profession Field Experience	FE23 focuses on a work-based learning experience. A concentrator is automatically a Pathway Major in this Cluster.
Supplemental CTE Courses	FE60 Child Development FE11 Early Childhood Education I BM20 Microsoft Excel				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts - Teacher Preparation</a> <a href="#">College Transfer Pathway Leading to the Associate in Science- Teacher Preparation</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Content Specific Educator’s License					
<b>CTE Careers Existing Today and Tomorrow:</b> Teacher, College Dean, Curriculum Developer, Superintendent, Virtual Learning Specialist, Avatar Instructor					

\*Denotes CTE Concentrator Course

CTE Career Cluster Finance				
CTE Career Pathway Accounting (ACCT)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	BA10 Accounting I	BA20 Accounting II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel BF10 Business Essentials ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree Accounting and Finance - Tax Preparation Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Microsoft Office 2016 Excel Expert 77-726; Intuit QuickBooks Certified User				
<b>CTE Careers Existing Today and Tomorrow:</b> Certified Public Accountant, Tax Supervisor, Financial Accounting Director, Currency Adoption Specialist, Anonymity Advocates				

\*Denotes CTE Concentrator Course

**CTE Career Cluster**

Finance

**CTE Career Pathway**

Financial Securities and Investments (FNLP)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	BF10 Business Essentials	BF21 Financial Planning I	BF22 Financial Planning II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel ME11 Entrepreneurship I BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Fundamentals Business Concepts (ASK-BF-CERT)					
<b>CTE Careers Existing Today and Tomorrow:</b> Financial Planner, Stockbroker, Crypto Currency Banker, Currency Adoption Specialist					

\*Denotes CTE Concentrator Course

CTE Career Cluster Health Science					
CTE Career Pathway Healthcare Professional (HPCP)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	HU40 Health Science I	HU42 Health Science II*	HN43 Nursing Fundamentals and Practicum (2 credit course)	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	HU10 Foundations of Health Science BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a> <a href="#">Associate Degree in Nursing, ADN Pathway</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Stop the Bleed, First Aid, OSHA 10-Hour General Industry (Healthcare) Certification, North Carolina Nurse Aide I					
<b>CTE Careers Existing Today and Tomorrow:</b> Registered Nurse Aid, Healthcare Implementation Consultant, Cradle to Grave Lifecycle Manager, Genetic Modification Designer, Organ Agent					

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Hospitality & Tourism

**CTE Career Pathway**  
Culinary Arts Applications (CULA)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	FH10 Culinary Arts & Hospitality I	FH11 Culinary Arts & Hospitality II Applications	FH13 Culinary Arts & Hospitality III*	FH14 Culinary Arts & Hospitality IV Applications  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	FN41 Food and Nutrition I BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Culinary Arts Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Certified Food Protection Manager (ANSI-Accredited), Certified Fundamental Cook, American Culinary Federation Culinary Arts Pre-PAC, American Association of Family & Consumer Sciences, ProStart Certificate of Achievement, National Restaurant Association Education Foundation					
<b>CTE Careers Existing Today and Tomorrow:</b> Culinary Operations Director, Sous Chef, Catering Coordinator, 3D Food Printer Chef					

\*Denotes CTE Concentrator Course

CTE Career Cluster Hospitality & Tourism					
CTE Career Pathway Culinary Arts Internship (CULI)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	FH10 Culinary Arts & Hospitality I	FH12 Culinary Arts & Hospitality II Internship	FH13 Culinary Arts & Hospitality III*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	FN41 Food and Nutrition I BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Certified Food Protection Manager (ANSI-Accredited), Certified Fundamental Cook, American Culinary Federation Culinary Arts Pre-PAC, American Association of Family & Consumer Sciences, ProStart Certificate of Achievement, National Restaurant Association Education Foundation					
<b>CTE Careers Existing Today and Tomorrow:</b> Culinary Specialist, Executive Chef, Cuisine Supervisor; Automated Meal Delivery Planner, Drone Food Manager					

\*Denotes CTE Concentrator Course



CTE Career Cluster Hospitality & Tourism				
CTE Career Pathway Sport & Event Marketing (SEMK)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	MH31 Sport & Event Marketing I	MH32 Sport & Event Marketing II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	ME11 Entrepreneurship I BM20 Microsoft Excel BF10 Business Essentials			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Customer Service and Sales Certification, Advanced Customer Service and Sales Certification, Fundamental Marketing Concepts				
<b>CTE Careers Existing Today and Tomorrow:</b> International Marketing Manager, Communications & Events Specialist, Super Athlete Designer, Global Entertainment Strategist				

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Hospitality & Tourism

**CTE Career Pathway**  
Travel & Tourism (TRTO)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	BF10 Business Essentials or MH31 Sport & Event Marketing I or MM51 Marketing	MH42 Hospitality and Tourism*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	ME11 Entrepreneurship I BM20 Microsoft Excel BP41 Computer Science I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Certified Guest Service Professionals (CGSP), Advanced Customer Service and Sales Certification, Fundamental Marketing Concepts				
<b>CTE Careers Existing Today and Tomorrow:</b> Hospitality Information Specialist, Hotel Food & Beverage Manager, Revenue Analyst; Virtual Travel Advisor				

\*Denotes CTE Concentrator Course

**CTE Career Cluster**

Human Services

**CTE Career Pathway**

Early Childhood Development & Services (EACH)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	FE60 Child Development	FE11 Early Childhood Education I* (2 credit course)	FE12 Early Childhood Education II (2 credit course)  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel BF10 Business Essentials ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Early Childhood Education Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, CPR, First Aid, NC Early Childhood Credential Equivalency				
<b>CTE Careers Existing Today and Tomorrow:</b> Human Services Clinician, Child Psychiatrist, Nutrition Consultant, Health & Human Services Professional, Deficiency Analyzer, Data Contextualist, Precision Education Specialist				

**\*Denotes CTE Concentrator Course**

CTE Career Cluster Human Services					
CTE Career Pathway Food and Nutrition (FONU)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major	
CTE Concentrator	CTE Major	FN41 Food and Nutrition I	FN42 Food and Nutrition II*	FN43 Food Science and Technology  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship	
Supplemental CTE Courses	BM20 Microsoft Excel BF10 Business Essentials ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Culinary Arts Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, ANSI-Accredited Food Handler Certificate, ANSI-Accredited Food Protection Manager Certification, Pre-Professional Assessment and Certification in Nutrition, Food, & Wellness, Food Safety & Science Certification, Pre-Professional Assessment & Certification in Food Science Fundamentals					
<b>CTE Careers Existing Today and Tomorrow:</b> Dietitian, Nutrition Specialist, Food Service Supervisor, Food Product Development Scientist, Food Safety Auditor, Industrial Meat Facility Supervisor, Cultured Food Technician					

\*Denotes CTE Concentrator Course

<b>CTE Career Cluster</b> Information Technology				
<b>CTE Career Pathway</b> AP Computer Science (APCS)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	OA02 AP Computer Science Principles	2A02 AP Computer Science A*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BI12 CompTIA IT Fundamentals BM20 Microsoft Excel ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, MTA 98-381 Introduction to Programming Using Python				
<b>CTE Careers Existing Today and Tomorrow:</b> Software Developer, Intellectual Property Associate, Data Stream Organizer				

\*Denotes CTE Concentrator Course

CTE Career Cluster Information Technology				
CTE Career Pathway Cisco Network Engineering (CNEN)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	II11 Cisco Network Engineering Technology I	II12 Cisco Network Engineering Technology II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BI12 CompTIA IT Fundamentals BM20 Microsoft Excel ME11 Entrepreneurship I BP41 Computer Science I T			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Information Technology - Cisco Network Administration Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, CompTIA IT Fundamentals (FCO-U61), Cisco Certified Entry Networking Technician (CCENT), Microsoft MTA 98-366 (Networking Fundamentals)				
<b>CTE Careers Existing Today and Tomorrow:</b> Data Center Network Engineer, Network Security Engineer, Sensor Inventor, Sensor Designer, Sensor Engineer				

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Information Technology

**CTE Career Pathway**  
Computer Engineering (COEN)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	BI12 CompTIA IT Fundamentals	II21 Computer Engineering Technology I	II22 Computer Engineering Technology II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel BF10 Business Essentials ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, CompTIA IT Fundamentals (FCO-U61), CompTIA A+ 1001, CompTIA IT Fundamentals, CompTIA A+ 1002 MTA 98-349 Operating System Fundamentals					
<b>CTE Careers Existing Today and Tomorrow:</b> Cybersecurity Sales Engineer, Embedded Software Application Engineer, Data Transmission Optimizer					

\*Denotes CTE Concentrator Course

CTE Career Cluster Information Technology					
CTE Career Pathway Computer Science Principles (CSPR)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	BP41 Computer Science I	BP42 Computer Science II*	2A02 AP Computer Science A	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BI12 CompTIA IT Fundamentals BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, MTA 98-381 Introduction to Programming Using Python					
<b>CTE Careers Existing Today and Tomorrow:</b> Software Developer, Intellectual Property Associate, Data Stream Organizer					

\*Denotes CTE Concentrator Course



CTE Career Cluster Information Technology				
CTE Career Pathway Python Programming (PYPR)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	BP14 Python Programming I	BP16 Python Programming II*	2A02 AP Computer Science  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BI12 CompTIA IT Fundamentals BM20 Microsoft Excel BL53 Develop in Swift Fundamentals			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, MTA 98-381 Introduction to Programming Using Python				
<b>CTE Careers Existing Today and Tomorrow:</b> Software Programmer, Virtual Property Associate, Automated Traffic Architect, Failure Point Assessor				

\*Denotes CTE Concentrator Course

CTE Career Cluster Information Technology					
CTE Career Pathway Swift Development Career Pathway (SDCP)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	BL52 Development in Swift Explorations	BL53 Development in Swift Explorations*	BL54 Develop in Swift Data Collections	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	OA02 AP Computer Science BI12 CompTIA IT Fundamentals BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Information Technology - Mobile Device Development Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, App Development with Swift Certified User					
<b>CTE Careers Existing Today and Tomorrow:</b> Software Analyst, Apple App Store Creator, Automation Engineer, Computer Personality Designers, Smart Contact App Developers, Avatar Designer					

\*Denotes CTE Concentrator Course

CTE Career Cluster					
Law, Public Safety, Corrections & Security					
CTE Career Pathway					
Emergency Management (EMMG)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IP11 Public Safety I	IP51 Emergency Management I*	IP52 Emergency Management II	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	HU40 Health Science I BM20 Microsoft Excel BF10 Business Essentials				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, NC Emergency Management I Certification, National Incident Management System, Community Emergency Response Team (C.E.R.T.) Certification					
<b>CTE Careers Existing Today and Tomorrow:</b> Public Safety Telecommunicator, Public Safety Risk Manager; Disaster Preparedness and Response Coordinator					

\*Denotes CTE Concentrator Course

CTE Career Cluster					
Law, Public Safety, Corrections & Security					
CTE Career Pathway					
Firefighter Technology (FIFI)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IP31 Firefighter Technology I	IP32 Firefighter Technology II*	IP33 Firefighter Technology III	IP51 Emergency Management I  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	IP11 Public Safety I HU40 Health Science I BM20 Microsoft Excel BF10 Business Essentials				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Fire Protection Technology Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, NC Office of State Fire Marshal (NCOSFM) - Firefighter Technology I, NC Office of State Fire Marshal (NCOSFM) - Firefighter Technology II, NC Office of State Fire Marshal (NCOSFM) - Firefighter Technology III					
<b>CTE Careers Existing Today and Tomorrow:</b> Public Safety Telecommunicator, Public Safety Risk Manager; Disaster Preparedness and Response Coordinator					

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Law, Public Safety, Corrections & Security

**CTE Career Pathway**  
Public Safety (PSPW)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	IP11 Public Safety I	IP12 Public Safety II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	IP51 Emergency Management I BM20 Microsoft Excel BF10 Business Essentials			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Criminal Justice Technology - Criminal Justice Foundations Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Certified Public Safety Executive, Public Safety Communications Certificate				
<b>CTE Careers Existing Today and Tomorrow:</b> Central Intelligence Agency Supervisor, Planetary Protection Officer, Prison System Dismantlers, Driverless Operating System Traffic Controller				

\*Denotes CTE Concentrator Course

CTE Career Cluster Manufacturing					
CTE Career Pathway Electronics (ELEC)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IM31 Electronics I	IM32 Electronics II*	IM33 Electronics III	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel BF10 Business Essentials BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Electronics Engineering Technology - Basic Electronics Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Electronics Technicians Association Certification: EM1, EM4, & EM2					
<b>CTE Careers Existing Today and Tomorrow:</b> Electronics Engineering Technician, Electronics Repair Specialist, Fusion System Integrator, Sensor Signal Engineer					

\*Denotes CTE Concentrator Course

CTE Career Cluster Manufacturing				
CTE Career Pathway Metals Manufacturing (MEMA)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	IM41 Metals Manufacturing Technology I	IM42 Metals Manufacturing Technology II*	IM43 Metals Manufacturing Technology III  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	CS11 Project Management I BM20 Microsoft Excel ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Manufacturing Technology Apprenticeship Certificate</a> <a href="#">Welding Technology Diploma</a> <a href="#">Welding Technology - Robot Operator Certificate</a> <a href="#">Welding Technology Certificate</a> <a href="#">Welding Technology in Manufacturing Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, NIMS Measurement-Materials and Safety, NIMS Job Planning-Benchwork and Layout, NIMS Milling I				
<b>CTE Careers Existing Today and Tomorrow:</b> Welder, Automation Auditor, Manufacturing Technology Engineer, Futuristic Metals Designer, Aquatic Welder				

\*Denotes CTE Concentrator Course

CTE Career Cluster Marketing				
CTE Career Pathway Marketing Management (MMGT)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	MM51 Marketing	MA52 Marketing Applications*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	II41 Adobe Visual Design I BF10 Business Essentials BM20 Microsoft Excel			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Customer Service and Sales Certification, Advanced Customer Service and Sales Certification, Fundamental Marketing Concepts				
<b>CTE Careers Existing Today and Tomorrow:</b> Inbound Marketing Specialist, Email Marketing Manager, Branding Specialist, Social Media Advertising Supervisor, Direct Consumer Consultant				

\*Denotes CTE Concentrator Course



**CTE Career Cluster  
Marketing**

**CTE Career Pathway  
Sales (PRSM)**

Pathway Completer		CTE Course 1	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	MI31 Sales I	MI32 Sales II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	MM51 Marketing BF10 Business Essentials BP41 Computer Science I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Business Administration - Sales Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate				
<b>CTE Careers Existing Today and Tomorrow:</b> Remote Sales Manager, Technical Sales Coordinator, Virtual Product Sales Advisor				

\*Denotes CTE Concentrator Course

CTE Career Cluster Science, Technology, Engineering & Mathematics				
CTE Career Pathway Drafting Engineering (DREN)				
Pathway Completer		CTE Course 1	CTE Course 2	CTE Career Pathway Major
CTE Concentrator	CTE Major	IC61 Drafting I	IV22 Drafting II – Engineering*	IV23 Drafting III – Engineering  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	CS11 Project Management I BM20 Microsoft Excel ME11 Entrepreneurship I			
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>			
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Autodesk Certified User AutoCAD, Autodesk Certified User Inventor, Certified SolidWorks Associate (CSWA), Autodesk Cert Professional Inventor OR Certified SolidWorks Professional (CSWP)				
<b>CTE Careers Existing Today and Tomorrow:</b> Computer Aided Designer, Hospital and Healthcare Dismantler, Geoengineer, Mass Energy Storage Developers				

\*Denotes CTE Concentrator Course

**CTE Career Cluster**  
Science, Technology, Engineering & Mathematics

**CTE Career Pathway**  
Engineering Technologies (ETEC)

Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	TL04 Engineering Technology I	TL05 Engineering Technology II*	TL06 Engineering Technology III	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	CS11 Project Management I MM51 Marketing BM20 Microsoft Excel				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Civil Engineering Technology - Geomatics Technology Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Data Mining & Analytics Certification, Certified Engineering Technologist (CT)					
<b>CTE Careers Existing Today and Tomorrow:</b> Mechanical Engineer, Industrial Engineer, Avionics Engineer, Heavy Air Engineers, Construction Material Designers					

\*Denotes CTE Concentrator Course

CTE Career Cluster Transportation, Distribution & Logistics					
CTE Career Pathway Automotive Services (AUTO)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IT11 Automotive Service Fundamentals	IT16 Automotive Service I	IT17 Automotive Service II*	IT18 Automotive Service III  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	IT30 Collision Repair Fundamentals BM20 Microsoft Excel ME11 Entrepreneurship I BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Automotive Systems Technology Diploma</a> <a href="#">Automotive Systems Technology - Brakes Certificate</a> <a href="#">Automotive Systems Technology - General Option Certificate</a> <a href="#">Automotive Systems Technology - Undercar Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, ASE Entry-Level Certification Maintenance and Light Repair; ASE Entry-Level Certification-Brakes; ASE Auto Maintenance and Light Repair Certification (G1); ASE Entry-Level Certification- Electrical/Electronic Systems					
<b>CTE Careers Existing Today and Tomorrow:</b> Automotive Technician, Traffic Transitionists, Drone Repair Technician, Process Automation Auditor					

\*Denotes CTE Concentrator Course

CTE Career Cluster Transportation, Distribution & Logistics					
CTE Career Pathway Aviation (AVIA)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IL77 Aerospace Technology I	IL78 Aerospace Technology II*	IK30 Aviation Manufacturing	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	IT11 Automotive Service Fundamentals IC61 Drafting I ID10 Drone Technology Fundamentals BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Aerospace Manufacturing Technology - Aircraft Structures Assembly &amp; Repair Diploma</a> <a href="#">Aviation Electronics (Avionics) Technology Diploma</a> <a href="#">Aviation Management and Career Pilot Technology Diploma</a> <a href="#">Aviation Systems Technology, Airframe Diploma (Spring)</a> <a href="#">Aviation Systems Technology, Powerplant Diploma (Fall)</a> <a href="#">Aviation Systems Technology, General Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, Airframe & Powerplant (A&P) Certified Technician, Aviation Maintenance Technician (AMT) Certificate					
<b>CTE Careers Existing Today and Tomorrow:</b> Aviation Technician, Experimental Test Pilot, Aviation Safety Inspector, Avionics Engineer, Drone Repair Expert					

\*Denotes CTE Concentrator Course

<p align="center"><b>CTE Career Cluster</b> Transportation, Distribution &amp; Logistics</p> <p align="center"><b>CTE Career Pathway</b> Collision Repair (COLL)</p>					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IT30 Collision Repair Fundamentals	IT31 Collision Repair I	IT32 Collision Repair II - Non-Structural* or IT33 Collision Repair II - Refinishing*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel ME11 Entrepreneurship I BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Collision Repair &amp; Refinishing Technology Diploma</a> <a href="#">Collision Repair &amp; Refinishing Technology Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, S/P2 Collision Repair and Refinish - Pollution Prevention S/P2 Collision Repair and Refinish Safety, I-CAR Platinum- Non-Structural Technician, ASE Entry Level Painting/Refinishing OR Platinum ProLevel 1 Refinishing					
<b>CTE Careers Existing Today and Tomorrow:</b> Body Shop Repair Technician, Digital Refinishing Processor, eVTOL Designer					

\*Denotes CTE Concentrator Course

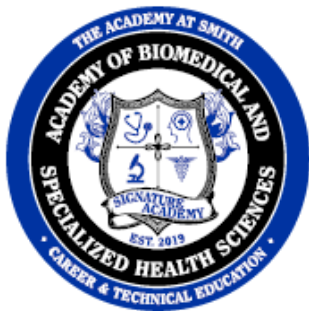
CTE Career Cluster Transportation, Distribution & Logistics					
CTE Career Pathway Diesel Technology (DISL)					
Pathway Completer		CTE Course 1	CTE Course 2	CTE Course 3	CTE Career Pathway Major
CTE Concentrator	CTE Major	IL50 Diesel Technology I	IL51 Diesel Technology II*	IL52 Diesel Technology III	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BF10 Business Essentials BM20 Microsoft Excel ME11 Entrepreneurship I BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Diesel &amp; Heavy Equipment Technology Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> WorkKeys National Career Readiness Certificate, ASE Technician Certification in Truck Equipment (E1-E3) and Medium and Heavy Truck (T1-T8)					
<b>CTE Careers Existing Today and Tomorrow:</b> Diesel Technician, Heavy Equipment Operator, Paving/Surface Equipment Operators, Self-Driving Truck Mechanic					

\*Denotes CTE Concentrator Course

# Career Clusters & Career Pathways

## CTE Course Sequence Guide

### Signature Career Academies





**Signature Career Academy of Biomedical Technology and Specialized Health Sciences**

Location: The Academy at Smith

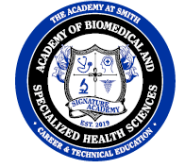


<p align="center"><b>CTE Career Cluster</b> Health Science</p> <hr/> <p align="center"><b>CTE Career Pathway</b> PLTW Biotechnology Research and Development (PLWB)</p>					
Pathway Completer		CTE Courses 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	HU10 Foundations of Health Sciences and HP70 PLTW Principles of Biomedical Sciences	HP71 PLTW Human Body Systems	HP72 PLTW Medical Interventions*	HP73 PLTW Biomedical Innovations  Work-Based Learning: CTE Apprenticeship or CTE Internship
Supplemental CTE Courses	<p align="center">HU40 Health Science I HU42 Health Science II (The above supplemental courses are essential for Block Schedules and should be taken in sequential order.)</p>				
Career & College Promise	<p align="center">Recommended Career &amp; College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a></p>				
<p><b>CTE Industry Recognized Credentials:</b> CPR/AED; First Aid; Stop the Bleed; OSHA 10-Hour General Industry (Healthcare) Certification</p>					
<p><b>CTE Careers Existing Today and Tomorrow:</b> Genetics Expert, Super Baby Designer, Body Modification Ethicist, Clone Rancher, Lip Designer</p>					

\*Denotes CTE Concentrator Course

**Signature Career Academy of Biomedical Technology and Specialized Health Sciences**

Location: The Academy at Smith

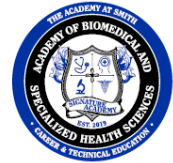


CTE Career Cluster Health Science					
CTE Career Pathway Pharmacy Technician (PHTC)					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	HU40 Health Science I	HU42 Health Science II*	HL17 Pharmacology Fundamentals I	HH32 Pharmacy Technician  Work-Based Learning: CTE Apprenticeship or CTE Internship
Supplemental CTE Courses	HP70 PLTW Principles of Biomedical Sciences HP71 PLTW Human Body Systems HP72 PLTW Medical Interventions (The above supplemental courses are essential for Block Schedules and should be taken in sequential order.)				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>				
<b>CTE Industry Recognized Credentials:</b> Stop the Bleed; CPR/AED; First Aid; OSHA 10-Hr. General Industry (Healthcare) Certification; North Carolina Nurse Aide I; CphT Certified Pharmacy Technician					
<b>CTE Careers Existing Today and Tomorrow:</b> Registered Nurse Aid; Pharmacy Technician, Healthcare Implementation Consultant, Cradle to Grave Lifecycle Manager, Genetic Modification Designer, Organ Agent					

**\*Denotes CTE Concentrator Course**

**Signature Career Academy of Biomedical Technology and Specialized Health Sciences**

Location: The Academy at Smith



CTE Career Cluster Human Services					
CTE Career Pathway Counseling and Mental Health (CMHC)					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	HU10 Foundations of Health Science	FC13 Counseling and Mental Health I	FC14 Counseling and Mental Health II*	Work-Based Learning: CTE Apprenticeship or CTE Internship
Supplemental CTE Courses	HU40 Health Science I HU42 Health Science II (The above supplemental courses are essential for Block Schedules and should be taken in sequential order.)				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Arts Degree</a>				
<b>CTE Industry Recognized Credentials:</b> Stop the Bleed; CPR/AED; First Aid; OSHA 10-Hr. General Industry (Healthcare) Certification					
<b>CTE Careers Existing Today and Tomorrow:</b> Behavioral Health Specialist, Outpatient Therapist, Psychologist, Sociologist, Quantified Self-Assessment Auditor					

\*Denotes CTE Concentrator Course

**Signature Career Academy of Computer and Information Science**

Location: Kearns Academy

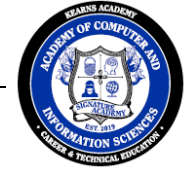
<p align="center"><b>CTE Career Cluster</b> Information Technology</p>					
<p align="center"><b>CTE Career Pathway</b> Cybersecurity (CBSY)</p>					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	BP41 Computer Science I	BC10 Cybersecurity Essentials	BN31 Network Security I*	BN32 Network Security II  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op) or CTE Internship
		Supplemental CTE Courses  BP42 Computer Science Principles II or OA02 AP Computer Science Principles BI12 CompTIA IT Fundamentals (The above supplemental courses are essential for Block Schedules and should be taken in sequential order.)			
Career & College Promise		Recommended Career & College Promise (CCP) Pathway: <a href="#">Cyber Crime and Digital Forensics Certificate</a>			
<b>CTE Industry Recognized Credentials:</b> CompTIA IT Fundamentals; CompTIA A+ 1001; CompTIA Security+; Certified Cybersecurity Assoc-PCCSA					
<b>CTE Careers Existing Today and Tomorrow:</b> Cybersecurity Sales Engineer, Embedded Software Application Engineer, Intellectual Property Associate, Data Stream Organizer					



\*Denotes CTE Concentrator Course

**Signature Career Academy of Computer and Information Science**

Location: Kearns Academy



<p align="center"><b>CTE Career Cluster</b> Information Technology</p> <hr/> <p align="center"><b>CTE Career Pathway</b> Artificial Intelligence (AI)</p>					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	BP41 Computer Science I	Artificial Intelligence I	Artificial Intelligence II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op) or CTE Internship
Supplemental CTE Courses	<p align="center">BP42 Computer Science Principles II or                      OA02 AP Computer Science Principles                      BI12 CompTIA IT Fundamentals                      BP14 Python Programming                      (The above supplemental courses are essential for Block Schedules and should be taken in sequential order.)</p>				
Career & College Promise	<p align="center">Recommended Career &amp; College Promise (CCP) Pathway:  <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a></p>				
<p><b>CTE Industry Recognized Credentials:</b> MTA 98-381 Introduction to Programming Using Python; Artificial Intelligence Engineering (AIE)</p>					
<p><b>CTE Careers Existing Today and Tomorrow:</b> Software Developer, Intellectual Property Associate, Application Development Leader, Machine Learning Engineer, Robotic Earthworm Drivers</p>					

\*Denotes CTE Concentrator Course

**Signature Career Academy of Computer and Information Science**

Location: Northeast HS



<b>CTE Career Cluster</b> Information Technology					
<b>CTE Career Pathway</b> Cybersecurity (CBSY)					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	BP41 Computer Science I	BC10 PLTW Cybersecurity	BN31 Network Security I*	BN32 Network Security II  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op) or CTE Internship
Supplemental CTE Courses	BP42 Computer Science Principles II or OA02 AP Computer Science Principles BI12 CompTIA IT Fundamentals (The above supplemental courses are essential for Block Schedules and should be taken in sequential order.)				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Cyber Crime and Digital Forensics Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> CompTIA IT Fundamentals; CompTIA A+ 1001; CompTIA Security+; Certified Cybersecurity Assoc-PCCSA					
<b>CTE Careers Existing Today and Tomorrow:</b> Cybersecurity Sales Engineer, Embedded Software Application Engineer, Information Technology Specialist, Cloud Security Operations Engineer					

\*Denotes CTE Concentrator Course

**Signature Career Academy of Computer and Information Science**

Location: Northeast HS



<p align="center"><b>CTE Career Cluster</b> Information Technology</p> <hr/> <p align="center"><b>CTE Career Pathway</b> Artificial Intelligence (AI)</p>					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	BP41 Computer Science I	Artificial Intelligence I	Artificial Intelligence II*	Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op) or CTE Internship
Supplemental CTE Courses	<p align="center">BP42 Computer Science Principles II or                      OA02 AP Computer Science Principles                      BI12 CompTIA IT Fundamentals                      BP14 Python Programming                      (The above supplemental courses are essential for Block Schedules and should be taken in sequential order.)</p>				
Career & College Promise	<p align="center">Recommended Career &amp; College Promise (CCP) Pathway:  <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a></p>				
<p><b>CTE Industry Recognized Credentials:</b> MTA 98-381 Introduction to Programming Using Python; Artificial Intelligence Engineering (AIE)</p>					
<p><b>CTE Careers Existing Today and Tomorrow:</b> Software Developer, Intellectual Property Associate, Analytics Expert, Sustainability Integration Expert, Robotic Earthworm Drivers</p>					

\*Denotes CTE Concentrator Course

**Signature Career Academy of Advanced Manufacturing and Engineering**

Location: Ben L. Smith HS



<p align="center"><b>CTE Career Cluster</b> Science, Technology, Engineering &amp; Mathematics</p>					
<p align="center"><b>CTE Career Pathway</b> PLTW Engineering (PLWE)</p>					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	TP11 PLTW Introduction to Engineering Design	TP12 PLTW Principles of Engineering	TP27 PLTW Environmental Sustainability*	TP31 PLTW Engineering Design & Development  Work-Based Learning: CTE Apprenticeship or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel ME11 Entrepreneurship I BF10 Business Essentials BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Computer Integrated Machining Diploma</a>				
<b>CTE Industry Recognized Credentials:</b> OSHA 10-Hour Industry Certification (optional credential offered anytime)					
<b>CTE Careers Existing Today and Tomorrow:</b> Mechanical Engineer, CAD Designer, Product Developer; Systems Transitionists, Efficiency Optimizer, Mass Energy Storage Developer					

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CTE Career Cluster Manufacturing					
CTE Career Pathway SREB Integrated Productions (INPT)					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	TR11 SREB AC Advanced Technology for Design and Production	TR12 SREB AC Systems of Advanced Technology*	TR13 SREB AC Mechatronic Systems for Advanced Production	TR14 SREB AC Design for the Production of Advanced Products  Work-Based Learning: CTE Apprenticeship or CTE Internship
Supplemental CTE Courses	BM20 Microsoft Excel ME11 Entrepreneurship I BF10 Business Essentials BP41 Computer Science I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Mechatronics Engineering Technology Entry Level Technician Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> NI Certified LabVIEW Associate Developer (CLAD); OSHA 10-Hour Industry Certification (optional credential offered anytime)					
<b>CTE Careers Existing Today and Tomorrow:</b> Electrical Engineer, Automation Engineer, Ceramics and Optical Expert, Mechatronics Hardware Engineer					

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**Signature Career Academy of Transportation, Distribution, and Logistics**

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<p align="center"><b>CTE Career Cluster</b>                      Transportation, Distribution &amp; Logistics</p>					
<p align="center"><b>CTE Career Pathway</b>                      Drone Technology (DRON)</p>					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 <sup>th</sup> Grade
CTE Concentrator	CTE Major	ID10 Drone Technology Fundamentals	BP41 Computer Science I	ID11 Drone Technology I	ID12 Drone Technology II*  Work-Based Learning: CTE Apprenticeship, Cooperative Education (Co-op), Clinical or CTE Internship
Supplemental CTE Courses	BP14 Python Programming I BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">College Transfer Pathway Leading to the Associate in Science Degree</a>				
<b>CTE Industry Recognized Credentials:</b> CFR (FAA) 14 Part 107 UAS Remote Pilot Certification, NCDOT NC UAS Operator Permit, Esri Drone2Map, NFPA 2400, USI Visual Line of Sight Systems Operations (VSO)					
<b>CTE Careers Existing Today and Tomorrow:</b> Drone Engineer, Drone Docking Designer, Operator Certification Specialist, Drone Traffic Optimizer					

**\*Denotes CTE Concentrator Course**

**Signature Career Academy of Transportation, Distribution, and Logistics**

Location: Western Guilford HS



<b>CTE Career Cluster</b> Transportation, Distribution & Logistics					
<b>CTE Career Pathway</b> Global Logistics & Supply Chain Management (GLSC)					
Pathway Completer		CTE Course 9 <sup>th</sup> Grade	CTE Course 10 <sup>th</sup> Grade	CTE Course 11 <sup>th</sup> Grade	CTE Career Pathway Course 12 Grade
CTE Concentrator	CTE Major	IK41 SREB AC Introduction to Logistics	IK42 SREB AC Functional Areas in Logistics*	IK43 SREB AC Global Logistics Management	IK44 SREB AC Logistics and Supply Chain Management  Work-Based Learning: CTE Apprenticeship or CTE Internship
Supplemental CTE Courses	ID10 Drone Technology Fundamentals BP41 Computer Science Principles I BM20 Microsoft Excel ME11 Entrepreneurship I				
Career & College Promise	Recommended Career & College Promise (CCP) Pathway: <a href="#">Supply Chain Management Diploma</a> <a href="#">Supply Chain Management - SAP Certificate</a> <a href="#">Supply Chain Management Certificate</a>				
<b>CTE Industry Recognized Credentials:</b> OSHA Forklift Certification, Certified Technician-Supply Chain Automation (CTSCA): CTSCA-EM Equipment Maintenance, CTSCA-ER Equipment Repair, CTSCA-NR Network Repair					
<b>CTE Careers Existing Today and Tomorrow:</b> Trade Compliance Supervisor, Logistics Engineer, Supply Chain Manager, Transportation Manager, Automated Traffic Architect, Driverless Operating System Engineer					

\*Denotes CTE Concentrator Course