**GCS CTE Clusters & Pathways**

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**GCS CTE Clusters & Pathways**

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| **CTE Career Cluster**Agricultural, Food and Natural Resources**CTE Career Pathway**Animal Science (ANSC) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | AU10 Agriscience Applications | AA21 Animal Science I | AA22 Animal Science IIorAA23 Animal Science II – Small Animal | AA41 Veterinary AssistingWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Certified Veterinary Assistant |
| **CTE Careers Existing Today and Tomorrow:** Veterinarian, Animal Health Scientist, Animal Biologist, Science Policy Director |

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| **CTE Career Cluster**Agricultural, Food and Natural Resources**CTE Career Pathway**Plant Systems (PLSV) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | AU10 Agriscience Applications | AP41 Horticulture I | AP42 Horticulture IIorAP44 Horticulture II – LandscapingorAP43 Horticulture II – Turfgrass Management | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, North Carolina Certified Plant Professional (CPP), Certified Young Plant Professional (CYPP), NC Private Pesticide Applicator |
| **CTE Careers Existing Today and Tomorrow:** Landscaper, Global System Architect, Fear Containment Manager |

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| **CTE Career Cluster**Architecture**CTE Career Pathway**Carpentry (CARP) |
| **Pathway Completer** | **Foundational Prerequisite****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IC00 Construction Core | IC21 Carpentry I | IC 22 Carpentry II | IC23 Carpentry III or Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, OSHA 10-Hour Construction Industry Certifications,NC NCCER Credential - Carpentry I, NC NCCER Credential - Carpentry II |
| **CTE Careers Existing Today and Tomorrow:** Shareability Auditor, Opportunity Spotters, Impact Assessors |

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| **CTE Career Cluster**Architecture**CTE Career Pathway**Drafting Architectural (DRFA) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Autodesk Certified User AutoCAD, Autodesk Certified User Revit, Autodesk Certified Professional Revit |
| **CTE Careers Existing Today and Tomorrow:** Architect, Construction Material Designer, Structural Engineer, Global System Architect |

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| **CTE Career Cluster**Architecture**CTE Career Pathway**Electrical Trades (ELTR) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 IIIWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** NC NCCER Credential - Electrical Trades, WorkKeys National Career Readiness Certificate |
| **CTE Careers Existing Today and Tomorrow:** Electrician,Micro Grid Strategists,Power Conversion Specialists |

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| **CTE Career Cluster**Architecture**CTE Career Pathway**Heating, Ventilation, and AC (HVAC) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IC00 Construction Core | IL55 Heating, Ventilation, & Air Conditioning I | IL56 Heating, Ventilation, & Air Conditioning II | IL57 Heating, Ventilation, & Air Conditioning IIIWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, NCCER Certification, Occupational Safety and Health Administration (OSHA) 10-Hour Construction Industry Credential |
| **CTE Careers Existing Today and Tomorrow:**  Commercial HVAC Technician, HVAC Project Manager, Controller, Robot Sherpa Operations Manager, IoT Smart Appliance Installer |

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| **CTE Career Cluster**Architecture**CTE Career Pathway**Interior Design (INDE) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | FI51 Interior Design I | FI52 Interior Design II | FI53 Interior Digital Applications | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Autodesk Certified User Revit |
| **CTE Careers Existing Today and Tomorrow:**  Furniture Designer, Facilities Architect, Virtual Showroom Coordinator, 3D Design Manager |

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| **CTE Career Cluster**Architecture**CTE Career Pathway**Masonry (MASO) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IC00 Construction Core  | IC11 Masonry I | IC12 Masonry II | IC13 Masonry III orWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Autodesk Certified User Revit |
| **CTE Careers Existing Today and Tomorrow:**  Furniture Designer, Facilities Architect, Virtual Showroom Coordinator, 3D Design Manager |

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| **CTE Career Cluster**Arts, A/V Technology, & Communications**CTE Career Pathway**Adobe Academy (ADAC) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | II31 Adobe Visual Design | II32 Adobe Digital Design | II33 Adobe Video Design | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Adobe Photoshop, InDesign, Illustrator, Adobe Dreamweaver, Adobe Premiere |
| **CTE Careers Existing Today and Tomorrow:** Motion Graphics Designer, 3Dimensionalist, 3D Printer “Ink” Developer, Animation Expert |

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| **CTE Career Cluster**Arts, A/V Technology, & Communications**CTE Career Pathway**Apparel and Textile Production (ATPR) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | MI21 Fashion Merchandising | FA31 Apparel and TextileProduction I | FA32 Apparel and TextileProduction II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPointME11 Entrepreneurship I |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Pre-Professional Assessment and Certification in Fashion, Textiles, and Apparel |
| **CTE Careers Existing Today and Tomorrow:** Textile CAD Designer, Apparel Colorist, 3D Fashion Designer, Digital Fabricator, eCommerce Strategist |

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| **CTE Career Cluster**Arts, A/V Technology, & Communications**CTE Career Pathway**Media Productions (MPRS) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | II31 Adobe Visual Design | II33 Adobe Video Design | IL70 Media Production I | IL71 Media Production IIWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, TBD by Industry Partners |
| **CTE Careers Existing Today and Tomorrow:** Video Scheduling Specialist, Master Control Operator, TV Programming Director, Streaming Service Animation Expert, Global Broadcast Operations Manager |

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| **CTE Career Cluster**Arts, A/V Technology, & Communications**CTE Career Pathway**Digital Design and Animation (DIDE) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | TS24 Digital Design and Animation I | TS25 Digital Design and Animation II | II33 Adobe Video Design | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPointME11 Entrepreneurship I |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Adobe Dreamweaver |
| **CTE Careers Existing Today and Tomorrow:** Graphic Designer, Digital Art Director, Virtual Animation Architect, Futuristic Design Coordinator |

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| **CTE Career Cluster**Arts, A/V Technology, & Communications**CTE Career Pathway**Game Art Design (GADE) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **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 orCTE Internship |
| **Supplemental****CTE Courses** | TS25 Digital Design and Animation II BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, TBD by Industry Partners |
| **CTE Careers Existing Today and Tomorrow:** Developer Relations Technical Creator,3D Game Sculptor, Marketing and Production Game Artist, Data Analytics Specialist, Mixed Reality Game Inventor |

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| **CTE Career Cluster**Business Management and Administration**CTE Career Pathway**Entrepreneurship (ENTRE) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BF10 Principles of Business and FinanceorMM51 Marketing | ME11 Entrepreneurship I | ME12 Entrepreneurship II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BF10 Principles of Business and FinanceBM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Concepts of Entrepreneurship & Management; Venture Entrepreneurial; Expedition Entrepreneurship and Small Business |
| **CTE Careers Existing Today and Tomorrow:** Small Business Owner, Strategic Management Professional,SocialEntrepreneur, Opportunity Spotters |

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| **CTE Career Cluster**Business Management and Administration**CTE Career Pathway**General Management (GMGT) |
| **Pathway Completer** | **Foundational Prerequisite****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BF10 Principles of Business and Finance | BB40 Business Management I | BB42 Business Management II |  Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Fundamentals Business Concepts (ASK-BF-CERT) |
| **CTE Careers Existing Today and Tomorrow:** Account Manager, Business Consultant,Shareability Auditor, Global Business Navigator |

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| **CTE Career Cluster**Business Management and Administration**CTE Career Pathway**Project Management (PMGT) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BF10 Principles of Business and Finance | CS11 Project Management I | CS12 Project Management II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPointBM20 Microsoft Excel |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, TBD by Industry Partners |
| **CTE Careers Existing Today and Tomorrow:** ProjectManagement Consultant, Project Director, Industry Process Advisor, Project Designer |

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| **CTE Career Cluster**Education and Training**CTE Career Pathway**Teaching/Training (TETR) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | FE60 Child Development | FE21 Teaching as a Profession I | FE22 Teach as a Profession II\* | \*FE22 is a two-credit course and includes a work-based learning experience. A concentrator is automatically a Major. |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, TBD by Post-Secondary Partners |
| **CTE Careers Existing Today and Tomorrow:** Teacher, College Dean, Curriculum Developer, Superintendent, Virtual Learning Specialist, Avatar Instructor |

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| **CTE Career Cluster**Finance**CTE Career Pathway**Accounting (ACCT) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BM20 Microsoft Excel | BA10 Accounting I | BA20 Accounting II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Microsoft Office 2016 Excel Expert 77-726; Intuit QuickBooks Certified User |
| **CTE Careers Existing Today and Tomorrow:** Certified Public Accountant, Tax Supervisor, Financial Accounting Director, Currency Adoption Specialist, Anonymity Advocates |

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| **CTE Career Cluster**Finance**CTE Career Pathway**Financial Securities and Investments (FSIN) |
| **Pathway Completer** | **Foundational Prerequisite****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BF10 Principles of Business and Finance | BF21 Financial Planning I | BF22 Financial Planning II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Fundamentals Business Concepts (ASK-BF-CERT) |
| **CTE Careers Existing Today and Tomorrow:** Financial Planner, Stockbroker, Crypto Currency Banker, Currency Adoption Specialist |

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| **CTE Career Cluster**Health Science**CTE Career Pathway**Healthcare Professional (HPCP) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Concentrator****CTE Course 2** | **CTE Career Pathway Major CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | HU40 Health Science I | HU42 Health Science II | HN43 Nursing Fundamentals and Practicum | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | HU10 Foundations of Health ScienceBM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Stop the Bleed, First Aid, OSHA 10-Hour General Industry (Healthcare) Certification, North Carolina Nurse Aide I |
| **CTE Careers Existing Today and Tomorrow:** Registered Nurse Aid, Healthcare Implementation Consultant, Cradle to Grave Lifecycle Manager, Genetic Modification Designer, Organ Agent |

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| **CTE Career Cluster**Hospitality & Tourism**CTE Career Pathway**Sports & Entertainment Marketing (SEMK) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BF10 Principles of Business and Finance | MH31 Sports & Entertainment Marketing I | MH32 Sports & Entertainment Marketing II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Customer Service and Sales Certification, Advanced Customer Service and Sales Certification, Fundamental Marketing Concepts |
| **CTE Careers Existing Today and Tomorrow:** International Marketing Manager, Communications & Events Specialist, Super Athlete Designer, Global Entertainment Strategist |

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| **CTE Career Cluster**Hospitality & Tourism **CTE Career Pathway**Travel & Tourism (TRTO) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | MM51 Marketing | MH31 Sports & Entertainment Marketing I | MH42 Hospitality and Tourism | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Certified Guest Service Professionals (CGSP), Advanced Customer Service and Sales Certification, Fundamental Marketing Concepts |
| **CTE Careers Existing Today and Tomorrow:** Hospitality Information Specialist, Hotel Food & Beverage Manager, Revenue Analyst; Virtual Travel Advisor |

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| **CTE Career Cluster**Hospitality & Tourism **CTE Career Pathway**Culinary Arts Applications (CULA) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 ApplicationsWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** 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 |
| **CTE Careers Existing Today and Tomorrow:** Culinary Operations Director, Sous Chef, Catering Coordinator, 3D Food Printer Chef |

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| **CTE Career Cluster**Hospitality & Tourism **CTE Career Pathway**Culinary Arts Internship (CULI) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 | \*FH12 includes a work-based learning experience. A concentrator is automatically a Major. Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** 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 |
| **CTE Careers Existing Today and Tomorrow:** Culinary Specialist, Executive Chef, Cuisine Supervisor; Automated Meal Delivery Planner, Drone Food Manager |

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| **CTE Career Cluster**Human Services**CTE Career Pathway**Early Childhood Development & Services (EACH) |
| **Pathway Completer** | **Foundational****CTE Course** | **Recommended Prerequisite****CTE Course 1** | **Concentrator****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 orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, CPR, First Aid, NC Early Childhood Credential Equivalency |
| **CTE Careers Existing Today and Tomorrow:** Human Services Clinician, Child Psychiatrist, Nutrition Consultant, Health & Human Services Professional, Deficiency Analyzer, Data Contexualist, Precision Education Specialist |

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Cisco Network Engineering (CNEN) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BI12 CompTIA IT Fundamentals | II11 Cisco Network Engineering Technology I | II12 Cisco Network EngineeringTechnology II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, CompTIA IT Fundamentals (FCO-U61), Cisco Certified Entry Networking Technician (CCENT), Microsoft MTA 98-366 (Networking Fundamentals) |
| **CTE Careers Existing Today and Tomorrow:** Data Center Network Engineer, Network Security Engineer, Sensor Inventor, Sensor Designer, Sensor Engineer |

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Computer Engineering (COEN) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** 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 |
| **CTE Careers Existing Today and Tomorrow:** Cybersecurity Sales Engineer, Embedded Software Application Engineer, Data Transmission Optimizer |

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Computer Science Principles (CSPR) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BP41 Computer Science I | BP42 Computer Science IIorOA02 AP Computer Science Principles | 2A02 AP Computer Science A | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BI12 CompTIA IT FundamentalsBM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, MTA 98-381 Introduction to Programming Using Python |
| **CTE Careers Existing Today and Tomorrow:** Software Developer, Intellectual Property Associate, Data Stream Organizer |

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Python Programming (PYPR) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | BP14 Python Programming I | BPXX Python Programming II | 2A02 AP Computer Science | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BI12 CompTIA IT FundamentalsBM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, MTA 98-381 Introduction to Programming Using Python |
| **CTE Careers Existing Today and Tomorrow:** Software Programmer, Virtual Property Associate, Automated Traffic Architect,Failure Point Assessor |

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| **CTE Career Cluster**Law, Public Safety, Corrections & Security**CTE Career Pathway**Emergency Management (EMMG) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPointHU40 Health Science I |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, NC Emergency Management I Certification, National Incident Management System, Community Emergency Response Team (C.E.R.T.) Certification |
| **CTE Careers Existing Today and Tomorrow:** Public Safety Telecommunicator, Public Safety Risk Manager; Disaster Preparedness and Response Coordinator |

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| **CTE Career Cluster**Law, Public Safety, Corrections & Security**CTE Career Pathway**Public Safety (PUSA) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IP11 Public Safety I | IP12 Public Safety II | IP51 Emergency Management I | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate |
| **CTE Careers Existing Today and Tomorrow:** Central Intelligence Agency Supervisor,Planetary Protection Officer,Prison System Dismantlers, Driverless Operating System Traffic Controller |

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| **CTE Career Cluster**Manufacturing**CTE Career Pathway**Electronics (ELEC) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Electronics Technicians Association Certification: EM1, EM4, & EM2 |
| **CTE Careers Existing Today and Tomorrow:** Electronics Engineering Technician, Electronics Repair Specialist, Fusion System Integrator, Sensor Signal Engineer |

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| **CTE Career Cluster**Manufacturing**CTE Career Pathway**Metals Manufacturing (MEMA) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IM41 Metals Manufacturing Technology I | IM42 Metals Manufacturing Technology II | CS11 Project Management I | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, NIMS Certification |
| **CTE Careers Existing Today and Tomorrow:** Welder,Automation Auditor, Manufacturing Technology Engineer, Futuristic Metals Designer, Aquatic Welder |

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| **CTE Career Cluster**Marketing**CTE Career Pathway**Marketing Management (MMGT) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | MM51 Marketing | MI42 Multichannel Merchandising | MA52 Marketing Applications | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, Customer Service and Sales Certification, Advanced Customer Service and Sales Certification, Fundamental Marketing Concepts |
| **CTE Careers Existing Today and Tomorrow:** Inbound Marketing Specialist, Email Marketing Manager, Branding Specialist, Social Media Advertising Supervisor, Direct Consumer Consultant |

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| **CTE Career Cluster**Marketing**CTE Career Pathway**Sales (PRSM) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | MM51 Marketing | MI31 Sales I | MI32 Sales II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate |
| **CTE Careers Existing Today and Tomorrow:** Remote Sales Manager, Technical Sales Coordinator, Virtual Product Sales Advisor |

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| **CTE Career Cluster**Science, Technology, Engineering & Mathematics**CTE Career Pathway**Drafting Engineering (DREN) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IC61 Drafting I | IV22 Drafting II – Engineering | IV23 Drafting III – Engineering | CS11 Project Management IWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate |
| **CTE Careers Existing Today and Tomorrow:** Computer Aided Designer, Hospital and Healthcare Dismantler, Geoengineer, Mass Energy Storage Developers |

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| **CTE Career Cluster**Science, Technology, Engineering & Mathematics**CTE Career Pathway**Technology Engineering & Design (TEND) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, TBD by Industry Leaders |
| **CTE Careers Existing Today and Tomorrow:** Mechanical Engineer, Industrial Engineer, Avionics Engineer |

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| **CTE Career Cluster**Transportation, Distribution & Logistics**CTE Career Pathway**Automotive Services (AUTO) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 IIIWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** 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 |
| **CTE Careers Existing Today and Tomorrow:** Auto Mechanic, Traffic Transitionists, Drone Repair Technician, Process Automation Auditor |

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| **CTE Career Cluster**Transportation, Distribution & Logistics**CTE Career Pathway**Aviation (AVIA) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IL77 Aviation I | IL78 Aviation II | IK30 Aviation Manufacturing | IK29 Aviation Electrical Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, TBD by Industry Partners |
| **CTE Careers Existing Today and Tomorrow:** Aviation Technician, Experimental Test Pilot, Aviation Safety Inspector, Avionics Engineer, Drone Repair Expert |

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| **CTE Career Cluster**Transportation, Distribution & Logistics**CTE Career Pathway**Collision Repair (COLL) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **CTE Concentrator** | **CTE Major** | IT30 Collision RepairFundamentals | IT31 Collision Repair I | IT32 Collision Repair II Non-StructuralorIT33 Collision Repair IIRefinishing | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, I-CAR Platinum- Non-Structural Technician |
| **CTE Careers Existing Today and Tomorrow:** Body Shop Repair Technician, Digital Refinishing Processor, eVTOL Designer |

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| **CTE Career Cluster**Transportation, Distribution & Logistics**CTE Career Pathway**Diesel Technology (DISL) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****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 orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** WorkKeys National Career Readiness Certificate, ASE Technician Certification in Truck Equipment (E1-E3) and Medium and Heavy Truck (T1-T8) |
| **CTE Careers Existing Today and Tomorrow:**  Diesel Technician, Heavy Equipment Operator, Paving/Surface Equipment Operators, Self-Driving Truck Mechanic |

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

Location: The Academy at Smith

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| **CTE Career Cluster**Health Science**CTE Career Pathway**PLTW Biotechnology Research and Development (PLWB) |
| **Pathway Completer** | **Foundational****CTE Course 1** | **Prerequisite****CTE Course 2** | **Concentrator****CTE Course 3** | **CTE Career Pathway Major** |
| **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 InnovationsWork-Based Learning:CTE Apprenticeship or CTE Internship |
| **Supplemental****CTE Courses** | HU40 Health Science IHU42 Health Science II(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** CPR/AED; First Aid |
| **CTE Careers Existing Today and Tomorrow:** Genetics Expert,Super Baby Designer, Body Modification Ethicist |

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

Location: The Academy at Smith

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| **CTE Career Cluster**Health Science**CTE Career Pathway**Pharmacy Technician (PHTC) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway****12th Grade** |
| **CTE Concentrator** | **CTE Major** | HU10 Foundations of Health Science | HU40 Health Science I | HU42 Health Science II | HH32 Pharmacy TechnicianWork-Based Learning:CTE Apprenticeship orCTE Internship |
| **Supplemental****CTE Courses** | HP70 PLTW Principles of Biomedical SciencesHP71 PLTW Human Body SystemsHP72 PLTW Medical Interventions(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** Stop the Bleed; First Aid; OSHA 10-Hour General Industry (Healthcare) Certification; North Carolina Nurse Aide I; Cpht Certified Pharmacy Technician |
| **CTE Careers Existing Today and Tomorrow:** Registered Nurse Aid; Pharmacy Technician, Healthcare Implementation Consultant, Cradle to Grave Lifecycle Manager, Genetic Modification Designer, Organ Agent |

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

Location: The Academy at Smith

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| **CTE Career Cluster**Human Services**CTE Career Pathway**Counseling and Mental Health (CMHC) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway** **12th 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** | Health Science IHealth Science II(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** Mental Health Technician |
| **CTE Careers Existing Today and Tomorrow:** Behavioral Health Specialist, Outpatient Therapist, Psychologist, Sociologist, Quantified Self-Assessment Auditor |

**Academy of Computer and Information Science**

Location: Kearns Academy

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Cybersecurity (CBSY) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Foundational Prerequisite****CTE Course 10th Grade** | **Prerequisite****CTE Course 11th Grade** | **CTE Career Pathway** **12th Grade** |
| **CTE Concentrator** | **CTE Major** | BP41 Computer Science Principles I | BC10 Cybersecurity Essentials | BN31 Network Security I | BN32 Network Security IIWork-Based Learning:CTE Apprenticeship or CTE Internship |
| **Supplemental****CTE Courses** | BP42 Computer Science Principles II or0A02 AP Computer Science PrinciplesBI12 CompTIA IT Fundamentals(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** CompTIA IT Fundamentals; Palo Alto Networks Certified Cybersecurity Associate (PCCSA); CompTIA Security+ |
| **CTE Careers Existing Today and Tomorrow:** Cybersecurity Sales Engineer, Embedded Software Application Engineer, Intellectual Property Associate, Data Stream Organizer |

**Academy of Computer and Information Science**

Location: Kearns Academy

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Artificial Intelligence (AI) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway** **12th Grade** |
| **CTE Concentrator** | **CTE Major** | BP41 Computer Science Principles I | Artificial Intelligence I | Artificial Intelligence II | Work-Based Learning:CTE Apprenticeship or CTE Internship |
| **Supplemental****CTE Courses** | BP42 Computer Science Principles II or0A02 AP Computer Science PrinciplesBI12 CompTIA IT Fundamentals BP14 Python Programming(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** MTA 98-381 Introduction to Programming Using Python; Artificial Intelligence Engineering (AIE) |
| **CTE Careers Existing Today and Tomorrow:** Software Developer, Intellectual Property Associate, Application Development Leader, Machine Learning Engineer |

**Academy of Computer and Information Science**

Location: Northeast HS

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Cybersecurity (CBSY) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Foundational Prerequisite****CTE Course 10th Grade** | **Prerequisite****CTE Course 11th Grade** | **CTE Career Pathway** **12th Grade** |
| **CTE Concentrator** | **CTE Major** | BP41 Computer Science Principles | BC10 Cybersecurity Essentials | BN31 Network Security I | BN32 Network Security IIWork-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op) orCTE Internship |
| **Supplemental****CTE Courses** | BP42 Computer Science Principles II or0A02 AP Computer Science PrinciplesBI12 CompTIA IT Fundamentals(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** CompTIA IT Fundamentals; Palo Alto Networks Certified Cybersecurity Associate (PCCSA); CompTIA Security+ |
| **CTE Careers Existing Today and Tomorrow:** Cybersecurity Sales Engineer, Embedded Software Application Engineer, Information Technology Specialist, Cloud Security Operations Engineer |

**Academy of Computer and Information Science**

Location: Northeast HS

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| **CTE Career Cluster**Information Technology**CTE Career Pathway**Artificial Intelligence (AI) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway** **12th Grade** |
| **CTE Concentrator** | **CTE Major** | BP41 Computer Science Principles I | Artificial Intelligence I | Artificial Intelligence II | Work-Based Learning:CTE Apprenticeship or CTE Internship |
| **Supplemental****CTE Courses** | BP42 Computer Science Principles II or0A02 AP Computer Science PrinciplesBI12 CompTIA IT Fundamentals BP14 Python Programming(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** MTA 98-381 Introduction to Programming Using Python; Artificial Intelligence Engineering (AIE) |
| **CTE Careers Existing Today and Tomorrow:** Software Developer, Intellectual Property Associate, Analytics Expert, Sustainability Integration Expert |

**Academy of Advanced Manufacturing and Engineering**

Location: Ben L. Smith HS

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| **CTE Career Cluster**Science, Technology, Engineering & Mathematics**CTE Career Pathway**PLTW Engineering (PLWE) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway** **12th Grade** |
| **CTE Concentrator** | **CTE Major** | TP11 PLTW Introduction to Engineering Design | TP12 PLTW Principles ofEngineering | TP27 PLTW Environmental Sustainability | TP31 PLTW Engineering Design & DevelopmentWork-Based Learning:CTE Apprenticeship orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** OSHA 10-Hour Industry Certification |
| **CTE Careers Existing Today and Tomorrow:** Mechanical Engineer, CAD Designer, Product Developer; Systems Transitionists, Efficiency Optimizer, Mass Energy Storage Developer |

**Academy of Advanced Manufacturing and Engineering**

Location: Ben L. Smith HS

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| **CTE Career Cluster**Manufacturing**CTE Career Pathway**SREB Integrated Productions (INPT) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway** **12th 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 | TTR14 SREB AC Design for the Production of Advanced ProductsWork-Based Learning:CTE Apprenticeship orCTE Internship |
| **Supplemental****CTE Courses** | BM10 Microsoft Word and PowerPoint(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** OSHA 10-Hour Industry Certification (optional credential offered anytime) |
| **CTE Careers Existing Today and Tomorrow:** Electrical Engineer, Automation Engineer, Ceramics and Optical Expert, Mechatronics Hardware Engineer |

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

Location: Western Guilford HS

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| **CTE Career Cluster**Transportation, Distribution & Logistics**CTE Career Pathway**Drone Technology (DRON) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway** **12th Grade** |
| **CTE Concentrator** | **CTE Major** | BP41 Computer Science Principles I | ID11 Drone Technology I | ID12 Drone Technology II | Work-Based Learning:CTE Apprenticeship, Cooperative Education (Co-op), Clinical orCTE Internship |
| **Supplemental****CTE Courses** | BP14 Python Programming IBM10 Microsoft Word and PowerPoint(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** FAA 14 CFR Part 107 |
| **CTE Careers Existing Today and Tomorrow:** Drone Engineer, Drone Docking Designer, Operator Certification Specialist, Drone Traffic Optimizer |

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

Location: Western Guilford HS

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| **CTE Career Cluster**Transportation, Distribution & Logistics**CTE Career Pathway**Global Logistics & Supply Chain Management (GLSC) |
| **Pathway Completer** | **Foundational****CTE Course 9th Grade** | **Prerequisite****CTE Course 10th Grade** | **Concentrator****CTE Course 11th Grade** | **CTE Career Pathway** **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 | IK 44 SREB AC Logistics and Supply Chain ManagementWork-Based Learning:CTE Apprenticeship orCTE Internship |
| **Supplemental****CTE Courses** | BM20 Microsoft Excel(The above supplemental courses are essential for Block Schedules and should be taken in sequential order.) |
| **Career & College Promise** | Approved Career & College Promise Career Technical Education Pathway |
| **CTE Industry Recognized Credentials:** OSHA Forklift Certification (optional credential offered anytime/age requirement) |
| **CTE Careers Existing Today and Tomorrow:** Trade Compliance Supervisor,Logistics Engineer,Supply Chain Manager, Transportation Manager, Automated Traffic Architect, Driverless Operating System Engineer |